UNIVERSIDADE FEDERAL DE SÃO CARLOS

CENTRO DE CIÊNCIAS EXATAS E DE TECNOLOGIA

PROGRAMA DE PÓS-GRADUAÇÃO EM ENGENHARIA URBANA

Desenvolvimento de modelo computacional com aplicação do *Kalman Filter* para detecção de vazamentos em redes de distribuição de água

Rafael H. M. Zerunian

São Carlos

2023

Rafael H. M. Zerunian

Desenvolvimento de modelo computacional com aplicação do *Kalman Filter* para detecção de vazamentos em redes de distribuição de água

Dissertação apresentada ao Programa de Pós-Graduação em Engenharia Urbana para obtenção do título de Mestre em Engenharia Urbana.

Orientação Prof. Dr. Erich Kellner

São Carlos

2023

Dedico este trabalho a todos os silenciosos agentes da transformação que são lembrados apenas na sua falta.

Agradecimentos

Ao professor e orientador - por vezes psicólogo - Dr. Erich Kellner pela paciência, sabedoria e altivez ao me guiar à um caminho de compreensão, autonomia e desenvolvimento pessoal, acadêmico e profissional. O privilégio de contar com alguém como o professor Erich, eu tenho certeza que não é algo corriqueiro, mas sim um daqueles arranjos que subvertem o caos que nos cerca para beneficiar de forma não merecida um indivíduo em estado de necessidade.

À minha família que me alicerça e pavimenta o caminho por onde eu ando, me dando conforto nos momentos difíceis e me impulsionando à alcançar a plenitude do meu ser. À minha esposa que me segura e me socorre mesmo quando ela mesma é quem mais precisa ser amparada. Ao meu lindo filho, que me ensina como ser amado de forma gratuita e que faz questão de me lembrar todos os dias que eu tenho um lugar onde sou querido, onde minha presença é desejada.

Aos meus parceiros do SeMAE, com quem busco construir pontes para um futuro melhor para o saneamento no Brasil. Ao essencial apoio e participação dos integrantes da equipe da Coordenadoria de Operação e Distribuição de Àgua, em especial Marcelo H. Dornelas, Luís Fernando Quintino da Silva, Rafael Macedo de Souza, Leonardo Salazar, Mayara de Marchi e Letícia Soldi Vargas que participaram de cada etapa deste trabalho contribuindo com ideias e, principalmente, com trabalho, assumindo tarefas essenciais no planejamento e execução de intervenções no sistema a fim de permitir que este estudo fosse bem-sucedido.

Àqueles que possibilitaram a existência deste trabalho, entre eles a Diretora de Planejamento e Obras Eng. Jaqueline de Freitas Reis Hallal à quem considero minha tutora, que me possibilitou ser o profissional que eu sou hoje e me ensinou o árduo caminho do convencimento, da paciência e da diplomacia, o Diretor de Serviços de Água Eng. Fábio Augusto Zambom Furlan, que sempre fez questão de apoiar e disponibilizar os recursos necessários para a execução deste trabalho, o Diretor Geral de Gestão Eng.º José Roberto Birolli que sempre fez o possível pelo avanço do combate às perdas, buscando investimentos e dando a importância necessária ao tema e o Superintendente Eng. Nicanor Batista Júnior que tornou central a temática das perdas em sua gestão e levou o SeMAE ao primeiro lugar no ranking do Instituto Trata Brasil como um *case* de sucesso em controle de perdas, alavancando e fornecendo as ferramentas mais modernas e eficientes, sempre escutando sua equipe técnica e promovendo o desenvolvimento profissional do setor.

Resumo

Nos sistemas de abastecimento de água, um dos tipos de perda são as Perdas Reais, causadas, sobretudo, por vazamentos nas redes de distribuição de água e, portanto, se constituem em um dos problemas mais complexos e urgentes para viabilizar um sistema de gestão dos recursos hídricos para o meio urbano que seja eficaz, tanto sob o aspecto ambiental, quanto financeiro. Dentre as diversas abordagens para o combate e o controle de vazamentos em redes de distribuição de água, está a utilização de métodos probabilísticos que possam traduzir com precisão razoável o funcionamento deste tipo de sistema dinâmico e entre estes métodos encontra-se o Kalman Filter, largamente utilizado no campo científico como uma ferramenta de previsão de estados a partir da conjugação de dados modelados com erros e dados obtidos através de sensores, cuja medição possui distorções que afetam sua precisão. Neste trabalho, foi estabelecido o objetivo de revisar os principais conceitos desta aplicação e analisar a viabilidade do método como instrumento operacional que possa se incorporar de forma viável ao cotidiano dos operadores dos sistemas de abastecimento de água. Para isso, foram estabelecidos os parâmetros de análise para um sistema de abastecimento de água real da cidade de São José do Rio Preto, São Paulo. Foi realizada a modelagem hidráulica a partir dos dados de cadastro do órgão de abastecimento de água com o software EPANET e, posteriormente, foram realizadas medições reais em pontos específicos desta rede que serviram como base para aplicação do Kalman Filter para determinação de vazamentos. A partir dos dados coletados, foi desenvolvido um código em Python que permite a determinação de valores residuais do cálculo iterativo do Kalman Filter e que, por conseguinte, demonstrou a relação entre estes valores e a ocorrência de vazamentos na rede de distribuição. Apesar do resultado positivo, o estudo pôde determinar que o método possui limitações, como a necessidade de medições difusas da pressão ao longo da rede de distribuição e a existência de um cadastro fidedigno do sistema, que em grande parte do Brasil podem ser obstáculos importantes.

Palavras-chave: Perdas reais, Filtro de Kalman, Modelagem Hidráulica, EPANET, Python.

Abstract

In water supply systems, one of the types of loss are the Real Losses, mainly caused by leaks in water distribution networks and, therefore, constitute one of the most complex and urgent problems to enable a water resources management system for the urban environment that is effective, both from an environmental and financial perspective. Among the various approaches for combating and controlling leaks in water distribution networks, there is the use of probabilistic methods that can translate with reasonable accuracy the functioning of this type of dynamic system and among these methods is the Kalman Filter, largely used in the scientific field as a state prediction tool from the combination of data modeled with errors and data obtained through sensors, whose measurement has distortions that affect its accuracy. In this work, the objective was to review the main concepts of this application and analyze the viability of the method as an operational instrument that can be incorporated in a viable way in the daily life of operators of water supply systems. For this, the analysis parameters were established for a real water supply system in the city of São José do Rio Preto, São Paulo. Hydraulic modeling was carried out based on data from the water supply service with the EPANET software and, later, real measurements were carried out at specific points of this network that served as a basis for the application of the Kalman Filter to determine leaks. From the collected data, a python code was developed that allows the determination of residual values of the iterative calculation of the Kalman Filter and that, therefore, demonstrated the relationship between these values and the occurrence of leaks in the distribution network. Despite the positive result, the study was able to determine that the method has limitations, such as the need for diffuse pressure measurements along the distribution network and the existence of a reliable system record, which in a large part of Brazil can be important obstacles.

Keywords: Real losses, Kalman Filter, Hydraulic Modelling, EPANET, Python.

Lista de ilustrações

Lista de quadros

Lista de tabelas

Sumário

1 Introdução

Entre os tópicos relacionados à gestão de sistemas de abastecimento de água, um dos mais importantes é a gestão das perdas (KINGDOM; LIEMBERGER; MARIN, 2006), uma vez que, em um planeta onde a água disponível para consumo humano se torna cada vez mais escassa e o processo de captação, tratamento e distribuição é cada vez mais complexo e desafiador (UNESCO; UN-WATER, 2020), deixar de entregar a água produzida ou deixar de contabilizá-la, passou a ser um problema com múltiplas facetas, afetando a sustentabilidade ambiental, bem como a saúde financeira dos órgãos de saneamento (KINGDOM; LIEMBERGER; MARIN, 2006).

Desta forma, se torna necessária a utilização das mais diversas ferramentas a fim de enfrentar o problema das perdas, tanto para compreender seus processos, causas e comportamentos, quanto para desenvolver técnicas e tecnologias que sejam capazes de prever, impedir, reduzir e combater este desperdício.

Não há como se pensar nas perdas como um processo com duração pré-determinada, sendo, ao contrário, um processo contínuo e permanente que envolve atividades que podem ser caracterizadas em três estágios: Avaliar e monitorar as perdas de água, traçar estratégias e planejar medidas que sejam economicamente eficientes e implementar ações ativas e reativas como a detecção de vazamentos e de usos ilegais (AL-WASHALI; SHARMA; KENNEDY, 2016).

É importante definir tão logo se inicie a reflexão sobre as perdas de água, que estas estão agrupadas em dois grandes conjuntos: as perdas reais e as perdas aparentes, sendo a primeira categoria definida de forma sucinta como a água captada, tratada e distribuída que não chega efetivamente ao usuário do serviço por conta de alguma anomalia na rede de distribuição como os vazamentos nas redes de distribuição. Já o segundo grupo se trata do volume captado, tratado e distribuído que chega ao consumidor, mas não é contabilizado pelos mecanismos de medição (AL-WASHALI; SHARMA; KENNEDY, 2016).

Ao realizar esta importante distinção, é possível estabelecer pensamentos, ações e processos muito diferentes para cada tipo de perda de água. Especificamente na questão das perdas reais, diversas ferramentas têm sido estudadas para o auxílio na detecção de vazamentos tais como métodos acústicos (Geofone, correlacionador de ruídos, etc.), balanço hídrico, análises de vazões mínimas noturnas entre outros. Uma destas ferramentas que tem sido cada vez mais utilizada no combate às perdas reais é a utilização de modelos matemáticos que possam estimar a existência e a posição destas fugas de água nos sistemas de distribuição (DELGADO-AGUIÑAGA; BESANÇON; BEGOVICH, 2015).

Neste contexto, o Kalman Filter é uma das possíveis alternativas para a realização desta tarefa, uma vez que sua finalidade é a de estimar o estado de variáveis desconhecidas

a partir de medições observadas ao longo do tempo (KIM e BANG, 2019). Portanto, uma vez que um sistema de distribuição é dotado de variáveis hidráulicas que interagem com a existência de vazamentos, tais como vazão e pressão, a utilização do Kalman Filter poderia relacionar dados advindos de várias localidades diferentes do sistema e determinar incorreções entre valores medidos em campo e um modelo hidráulico correspondente funcionando como um estimador de vazamentos (DELGADO-AGUIÑAGA; BESANÇON; BEGOVICH, 2015).

Neste sentido, este estudo se dedicará ao estudo das perdas reais e de modelos matemáticos que possam auxiliar na detecção de vazamentos, sobretudo a ferramenta do Kalman Filter que será tratada em profundidade e aplicada em um sistema de abastecimento de água real do município de São José do Rio Preto, SP.

2 Justificativa

No Brasil, o índice de perdas na distribuição está na ordem de 40,39% - podendo haver distorções já que os dados se concentram nas 100 cidades com maior população e estes dados são obtidos por meio de auto declaração -, segundo Ranking do saneamento do Instituto Trata Brasil (2023) que tratou os dados constantes do Sistema Nacional de Informações sobre Saneamento (SNIS) de 2021. Vale ressaltar que este valor está acima da média de 35% registrada pelo Banco Mundial através de seu banco de dados que agrega valores de mais de 900 órgãos em 44 países em desenvolvimento (KINGDOM; LIEMBERGER; MARIN, 2006).

Desta forma, o desenvolvimento de tecnologias para esta área específica do setor tem especial importância, na medida que se propõe a resolver uma problemática impactante, tanto do ponto de vista socioambiental, como do ponto de vista econômico. Não há dúvidas de que as perdas são responsáveis por boa parte do déficit de investimentos no setor, como, por exemplo, os gastos desnecessários com novas fontes de captação que acabam por aumentar excessivamente os custos operacionais (GÜNGÖR; YARAR; FIRAT, 2017)).

3 Objetivos

Este trabalho teve como objetivo principal aplicar o conceito do *Kalman Filter* como ferramenta de identificação e localização de vazamentos em redes de distribuição de água. Para isso, este arcabouço teórico foi aplicado em uma situação de abastecimento real em um sistema de abastecimento público de água potável do município de São José do Rio Preto, São Paulo. Assim, foram definidos como objetivos específicos:

- Desenvolvimento do algoritmo computacional, aplicando o método do *Kalman Filter* capaz de estabelecer as relações entre os dados coletados e o modelo hidráulico.

- Aplicar o modelo computacional e correlacionar com dados de campo a fim de indicar provável localização de vazamentos na rede estudada.

4 Revisão Bibliográfica

4.1 Perdas reais em sistemas de distribuição de água

Através do método de classificação das perdas, ou de forma ainda mais ampla, da água não-faturada, a International Water Association (IWA) através da publicação de LAMBERT e HIRNER (2000), delimitou e padronizou os conceitos relacionados com a origem e as características de cada forma de perda. Esta padronização permitiu a criação de uma linguagem única para todo o mundo e, por conseguinte, um desenho que permita relacionar dados de diversas origens geográficas.

Mas, além disso, essa metodologia promove um melhor entendimento acerca da problemática das perdas, sobretudo em localidades pouco desenvolvidas e apesar das pertinentes críticas à uma possível complexidade desnecessária dos termos empregados, apenas a existência de um material amplamente validado, permite que gestores de pequenos sistemas de abastecimento de água tenham acesso à uma informação de extrema utilidade para quem está buscando tratar das perdas. No quadro 1, a classificação empregada pela IWA tem o seguinte formato:

Quadro 1 – Padrão IWA de Balanço Hídrico

Volume de Entrada no Sistema	Consumo Autorizado	Consumo Autorizado Faturado	Consumo Medido Faturado (incluíndo água exportada)	Água Faturada
			Consumo Estimado Faturado	
		Consumo Autorizado não faturado	Consumo Medido não Faturado	Água Não Convertida em Receita
			Consumo não medido não Faturado	
	Perdas de água	Perdas Aparentes	Consumo não Autorizado	
			Imprecisão de Medição	
		Perdas Reais	Vazamentos e Extravasamentos em Reservatórios	
			Vazamentos em Adutoras e Redes	
			Vazamentos em Ramais até o ponto de Medição do Cliente	

Fonte: LAMBERT e HIRNER, 2000

O combate especificamente das perdas reais, tem sido objeto de análise e estudo por diversos autores contemporâneos e é possível afirmar que há uma diversidade razoável de metodologias que possuem a intenção de enfrentar este problema a partir de diferentes panoramas. Algumas das mais relevantes e mais utilizadas abordagens atuais são a análise do tipo top-down de balanço hídrico, BABE (bursts and background estimates) e método das vazões mínimas noturnas ou bottom-up.

Cada uma dessas metodologias tem complexidades, necessidades de dados e acurácia e procedimentos diferentes e, portanto, não há exatamente uma hierarquia entre elas. Na realidade, é plausível dizer que, a depender da estrutura do órgão responsável, uma será mais aplicável que outra, o que pode ser visto com bons olhos, já que esta diversidade de métodos permite que haja uma alternativa para controle de perdas reais na maior parte das realidades.

Contudo, é preciso salientar que, apesar dessas alternativas, muitas instalações, sobretudo na realidade de países subdesenvolvidos e em desenvolvimento, carecem de ferramentas básicas, como os parques de macro e micromedição e, nestes casos, apesar de possível, o procedimento pode se tornar dispendioso demais e, assim, abandonado.

4.2 Metodologia *Top-Down* de Balanço Hídrico

Dentre as metodologias listadas anteriormente, é possível inferir que o Balanço Hídrico tem o procedimento mais simples, apesar de necessitar de dados com certa precisão advindos do parque de macromedição e micromedição. Isso porque o método consiste em contabilizar o volume de entrada de água no sistema de distribuição (*input*) e, por conseguinte, o volume registrado na saída ou, mais precisamente, nos medidores dos consumidores (*output*).

A maior desvantagem deste método está justamente no fato de que, ao ser aplicada esta equação, o resultado será o volume de perdas total que pode se traduzir, percentualmente ou com outras relações como l/km de rede ou l/lig.dia, como um índice de perdas na distribuição total (IPDT). Como é possível deduzir, este índice tem sua importância do ponto de vista gerencial, na visão macro do sistema, mas é bastante pobre quando utilizado para direcionar as ações de combate às perdas, já que não distingue o que são perdas reais ou aparentes, tornando bastante imprecisa qualquer inferência sobre o quanto de participação cada uma delas tem no resultado apurado.

A partir deste resultado, Lambert e Hirner (2000), sugerem que as perdas aparentes podem ser estimadas a partir de uma série de cálculos que tem como base um conhecimento acumulado sobre as características de cada componente deste tipo de perda, a saber: Roubo de Água e Fraudes, submedição dos hidrômetros e erros na coleta de dados. Em seguida, de posse deste resultado, seria possível conhecer o volume de perdas representado pelas

perdas aparentes e, consequentemente, as perdas reais por exclusão. Justamente por conta da dinâmica de se saber o todo para depois inferir suas parcelas, que esse método é considerado como do tipo *top-down*.

Não é razoável dizer que este método atinge um nível próximo ao estado da arte no que diz respeito ao controle e combate às perdas, mas é possível dizer que é um bom ponto de partida para situações em que não haja qualquer tipo de método sendo aplicado, uma vez que não depende do monitoramento de pressões e tem baixo custo operacional.

Contudo, é preciso salientar que possui sérias deficiências se utilizado de forma isolada e, sobretudo, se a infraestrutura da planta for demasiadamente deficitária. Entre seus pontos negativos estão a dedução inapropriada de perdas aparentes em países subdesenvolvidos e em desenvolvimento por conta de má qualidade da micromedição, a inexistência de uma metodologia validada de forma universal para estimar consumos não autorizados e o processo de estimativa das perdas aparentes que congela seus valores, impedindo o monitoramento adequado de políticas direcionadas para este aspecto.

4.3 BABE (*Burst and background estimation*)

Este método também deve ser classificado como do tipo *top-down* e pode ser entendido como complementar ao método do Balanço Hídrico. O seu conceito básico é justamente caminhar pelo sentido oposto do procedimento anterior, isto é, estimando não as perdas aparentes, mas as perdas reais. Seu procedimento parte da premissa de que o volume de um vazamento individual pode ser calculado pela sua vazão média vezes o tempo em que ficou ativo.

4.4 Vazões Mínimas Noturnas

O conceito deste método, que tem como objeto de análise específica as perdas reais, parte do princípio de que durante a madrugada, há um horário em que a vazão que sai do reservatório que abastece um dado sistema de abastecimento tem a menor parcela da demanda referente aos usos humanos e que, portanto, a maioria do volume disponibilizado à rede de distribuição seria referente à demanda dos vazamentos. Com esta perspectiva, acaba sendo um método mais simples que exige apenas a existência de macromedição na saída do reservatório (ou na bomba) que abastece um determinado sistema.

Em outras palavras, significa dizer que, idealmente, se ninguém utilizar água em algum momento, em um sistema estanque, a vazão deveria cair a zero e se isso não acontece, em grande medida, é por conta dos vazamentos.

Apesar de bastante eficiente para a tomada de decisões rápidas no cotidiano da operação dos sistemas de abastecimento, é preciso realizar algumas ressalvas a este método.

Em primeiro lugar, é possível a existência de distorções em relação ao resultado em locais onde haja vida noturna agitada ou em locais onde haja intermitência no abastecimento acarretando a diminuição da vazão média diária de forma artificial, por exemplo.

Não obstante, é possível compreender duas formas de se trabalhar com este procedimento, a saber: Cálculo do Fator de Pesquisa ou o Cálculo do Fator Noite-Dia.

4.5   Fator de Pesquisa

A ideia deste método é fornecer um indicador sobre o potencial de retorno na realização de uma pesquisa acústica de vazamentos em um dado sistema, ou seja, ele pretende indicar quais sistemas são mais viáveis para aplicação de medidas que visem a redução de perdas reais. Aliás, este é um dos seus maiores benefícios, porquanto, fornece uma visão mais restrita às perdas reais, não se confundindo com as perdas aparentes.

O cálculo deste indicador deve ser realizado da seguinte maneira (GONÇALVES; ALVIM, 2007):

$$FP = \frac{Qmn}{Qmed} \tag{4.1}$$

Sendo:

FP: fator de pesquisa que variará entre 0 e 1;

Qmn: vazão mínima noturna;

Qmed: média das vazões no dia analisado.

O fator de pesquisa indica que, quando seu valor for maior que 0,30, existe viabilidade econômica para a realização de Pesquisa de Vazamentos. Ou seja, quanto mais perto de um, maior a possibilidade de existência de vazamentos e quanto mais próximo de zero, menor (GONÇALVES; ALVIM, 2007).

Porém, um ponto importante é que este método não verifica a pressão da rede e, portanto, assume a vazão mínima noturna como uma constante de perdas, sendo que o volume de perdas varia ao longo do dia conforme a variação de demanda e, por conseguinte, da pressão em redes não metálicas cuja área do orifício se torna variável (PVC, Polietileno, etc.)(AL-WASHALI; SHARMA; KENNEDY, 2016).

Esta característica do Fator de Pesquisa o coloca como um indicador sem grande valor gerencial, uma vez que seu valor adimensional (entre 0 e 1) tem como objetivo relacionar as perdas reais com observações e experiências prévias sobre a condição do sistema. Sendo assim, tal metodologia é aplicável apenas como uma ferramenta rápida e extremamente descomplicada de se fazer uma inferência sobre a necessidade de uma varredura para localização de vazamentos não-visíveis.

4.6 Fator noite-dia

Para atenuar as distorções identificadas pelo método descrito anteriormente, pode ser utilizada a equação FAVAD (Fixed and Variable Area Discharges) que estabelece um novo conceito para o cálculo do volume perdido em um vazamento compreendendo que estes vazamentos podem ter formatos variados e, com exceção nas redes de ferro, estes orifícios variam de tamanho conforme a pressão na rede.

Após a realização de experimentos com a finalidade de simplificar a equação que demonstra o conceito FAVAD, sua forma empírica é expressa da seguinte maneira:

$$\frac{Q_1}{Q_0} = \left(\frac{P_1}{P_0}\right)^{n1} \tag{4.2}$$

Sendo:

Q1 = vazão final dos vazamentos;

Q0 = vazão inicial dos vazamentos;

P1 = pressão média final da rede;

P0 = pressão média inicial da rede;

n1 = expoente que varia de 0,5 a 1,5, usualmente.

Em valores mais próximos de 0,5, o expoente n1 denota a tendência à vazamentos com área fixa e quanto mais próximo de 1,5, maior a tendência para vazamentos com áreas variáveis (AL-WASHALI; SHARMA; KENNEDY, 2016).

Para se chegar ao valor N1 do sistema, é possível isolá-lo na fórmula da seguinte maneira:

$$log\frac{Q_1}{Q_0} = log\left(\frac{P_1}{P_0}\right)^{n1} = n1 \times log\left(\frac{P_1}{P_0}\right) \tag{4.3}$$

E, posteriormente:

$$n1 = \frac{log\left(\frac{Q_1}{Q_0}\right)}{log\left(\frac{P_1}{P_0}\right)} \tag{4.4}$$

Para realizar a coleta dos dados necessários deve ser realizado um teste em campo, durante a madrugada (no horário das vazões mínimas noturnas) e devem ser medidas as seguintes variáveis:

- Pressão Média do Sistema (PMS);

- Vazão na entrada do sistema.

Do volume medido na saída do reservatório deve ser descontado o valor do consumo noturno, que segundo a Companhia de Saneamento Básico do Estado de São Paulo (SABESP), pode ser estimado da seguinte maneira:

- Consumo legítimo - 0,34 l/hora por habitante;

- Vazamentos internos nas instalações dos usuários pressurizadas diretamente pela rede - 0,5 l/hora por ramal pressurizado.

O teste consiste na redução da vazão e da PMS, os dados são registrados em algumas etapas de diminuição da pressão, aplicados na equação e a média dos valores fornece, por fim, o valor de N1 para o sistema. De qualquer maneira, um sistema grande com mescla de materiais tende à um valor entre 1 e 1,15.

Para se obter o valor da PMS, um dos dados utilizado para os cálculos apresentados, deve ser coletado dados de pressão durante 24 horas no chamado Ponto Médio da superfície piezométrica do sistema. Este ponto pode ser verificado em um software de modelagem hidráulica, como o EPANET, por exemplo, desde que todos os dados do sistema estejam disponíveis (AESBE, 2015).

Alternativamente, uma forma de se obter este valor é coletar estas pressões em um ponto que represente a média das pressões do sistema. Contudo, este ponto deve ser determinado através do método das cotas médias ponderadas em que as cotas serão divididas em faixas de mesmo intervalo e terão peso maior ou menor de acordo com o número de ligações atendidas por cada faixa, conforme o exemplo na Tabela 1.

FAIXAS			Quantidade de ramais (A)	(Cota Média)x(Qtd ramais) (B)
Cota mínima	Cota máxima	Cota média		
112	116	114	115	13.110
116	120	118	230	27.140
120	124	122	480	58.560
124	128	126	270	34.020
128	132	130	310	40.300
132	136	134	545	73.030
			1.950	246.160
		Cota Ponderada (B/A):	126,2	m

Tabela 1 – Exemplo de cálculo da cota média ponderada

Fonte: AESBE, 2015

Após determinada a Cota Média Ponderada, deve ser medido neste ponto os valores de pressão durante o período de 24 horas.O próximo passo é determinar a parcela

desta perda referente às perdas inevitáveis e para isto pode ser utilizado o conhecimento disponibilizado pela IWA que estudou alguns sistemas "ideais" e determinou o que deveria ser considerado como perda inerente. A conclusão deste estudo se dá conforme se verifica no Quadro 2.

Componente da infraestrutura	Volume de Vazamentos não detectáveis
Redes	9,6 litros/km rede/dia/mca
Ramais Domiciliares	0,60 litros/ramal/dia/mca
Ramais Domiciliares dentro do terreno do usuário (Condição inválida para os sistemas brasileiros onde os medidores são instalados na divisa do terreno)	16 litros/km tubulação interna/dia/mca

Quadro 2 – Perdas inerentes no padrão IWA

Fonte: Lambert et al. (1999)

Este cálculo pode ser resumido na seguinte equação (AESBE, 2015):

$$VI(\frac{litros}{dia}) = (9,6 \times ER + 0,6 \times QR) \times PM \qquad (4.5)$$

Em que,

VI = Vazamentos inerentes em litros/dia;

ER = Extensão de rede em Km;

QR = Quantidade de ramais pressurizados;

PMS = Pressão média do sistema em MCA para sistemas com pressurização contínua.

Desta forma, a partir da PMS coletada à cada hora no sistema, pode-se conhecer o valor de Perda Inerente por hora.

O último passo da análise é determinar o volume perdido no dia e para isso é necessário utilizar o Fator Noite-Dia (FND) que é utilizado para multiplicar o volume de vazamentos no horário de menor consumo. Em primeira análise pode-se chegar à conclusão de que seria correto multiplicar o volume de vazamentos no horário de menor consumo por 24 e ter-se-ia o volume perdido no dia, mas, conforme a relação entre vazão e pressão explicitada, isso seria um equívoco.

O FND corrige esta questão através da seguinte equação:

$$FND = \sum (Pi/P0)^n 1 \qquad (4.6)$$

Em que,

Pi = pressão média da rede em um horário qualquer do dia;

P0 = pressão média quando ocorre a vazão mínima noturna;

n1 = fator de escala na relação pressão-vazamento.

Este fator, calculado de forma horária, resultará em um valor de correção para a vazão mínima noturna, conforme se verifica na Tabela 2.

N1 ADOTADO:			1,50
Ordem	Horário	Pressões médias mca	FND=$\sum (P_i/P_{34})$^N1
1	00:00 - 01:00	22,00	0,88
2	01:00 - 02:00	23,00	0,94
3	02:00 - 03:00	24,00	1,00
4	03:00 - 04:00	24,00	1,00
5	04:00 - 05:00	23,00	0,94
6	05:00 - 06:00	23,00	0,94
7	06:00 - 07:00	22,00	0,88
8	07:00 - 08:00	21,00	0,82
9	08:00 - 09:00	20,00	0,76
10	09:00 - 10:00	19,00	0,70
11	10:00 - 11:00	18,00	0,65
12	11:00 - 12:00	17,00	0,60
13	12:00 - 13:00	16,00	0,54
14	13:00 - 14:00	17,00	0,60
15	14:00 - 15:00	18,00	0,65
16	15:00 - 16:00	18,00	0,65
17	16:00 - 17:00	19,00	0,70
18	17:00 - 18:00	19,00	0,70
19	18:00 - 19:00	20,00	0,76
20	19:00 - 20:00	20,00	0,76
21	20:00 - 21:00	21,00	0,82
22	21:00 - 22:00	21,00	0,82
23	22:00 - 23:00	22,00	0,88
24	23:00 - 00:00	22,00	0,88
PMS - TOTAIS:		20,38	
FND			18,86

Tabela 2 – Exemplo de aplicação do FND

Fonte: AESBE, 2015

4.7 *Kalman Filter* (KF)

O *Kalman Filter* é um algoritmo que possui como objetivo estimar o estado desconhecido de variáveis, na presença de medições ruidosas e imprecisas, em sistemas dinâmicos lineares. Além disso, este instrumento matemático permite que seja realizada a predição deste estado em um momento futuro com base em suas estimativas e correções passadas.

Essa perspectiva abre uma fronteira bastante importante no desenvolvimento de ferramentas tecnológicas que necessitam de dados acurados que só podem ser obtidos por meios de medições indiretas ou contaminadas por imprecisões, com por exemplo, o Sistema de Posicionamento Global (GPS) em que as medições via satélite podem sofrer com interferências climáticas, pequenas variações no posicionamento do satélite, entre outras situações que afetam sua precisão.

O processo de aplicação do Kalman Filter impõe a necessidade de assimilação dos dados obtidos, isto significa dizer que a cada passo de tempo em que o algoritmo é executado ele realiza uma previsão que é comparada com a medição, então é realizada uma correção e uma nova previsão para o próximo passo de tempo.

Portanto, como explicitado por (RUZZA, 2017):

> "O Kalman Filter é constituído por três componentes principais. O primeiro é um vetor de estados que usualmente inclui parâmetros de modelo e variáveis dependentes. O segundo é um modelo de estimativas. O terceiro é um modelo de assimilação cujo propósito é combinar a informação vinda do modelo de estimativa e os dados observados. A diferença entre as duas fontes de informação é chamada de inovação. O peso atribuído à inovação é determinado através da matriz de covariância de erro de estado e a matriz de covariância de erro da observação."

Assim, o Kalman Filter pode ser expresso através das seguintes equações (RUZZA, 2017):

$$X_{t_i}^f = AX_{t_i-1}^u + e_{1t_i} \tag{4.7}$$

$$P_{t_i}^f = AP_{t_i-1}^u A^T + W_{t_i} \tag{4.8}$$

$$Z_{t_i}^m = MX_{t_i} + e_{2t_i} \tag{4.9}$$

$$K_{t_i} = PF_{t_i}M^T(MPF_{t_i}M^T + R_{t_i})^{-1} \tag{4.10}$$

$$X_{t_i}^u = X_{t_i}^f + K_{t_i}(Z_{t_i}^m - MX_{t_i}^f) \tag{4.11}$$

$$P_{t_i}^u = (I - K_{t_i}M)P_{t_i}^f \tag{4.12}$$

Sendo,

X é o vetor de estados, que representa o estado do sistema, incluindo os parâmetros de modelo, variáveis dependentes e outras observações;

Z^m é o vetor de medições (ou observação);

M é o operador de medição que representa a relação entre o vetor de estados e o vetor de medições;

P é a matriz covariância de erro de estado;

R é a matriz de covariância de erro de medições (observações);

K é o ganho de Kalman;

A é a matriz de transição linear ou matriz de sensibilidade que é um operador linear para extrapolar o estado de um passo de tempo para o próximo;

e_1 e **e_2** são ruídos brancos independentes para o modelo de predição e medição (observação), extraídos a partir de distribuições multi-normais (gaussiana) com média zero e covariância **W** e **R**, respectivamente;

t_i é o passo de tempo;

T (sobrescrito) significa operação de transposição;

f e **u** (sobrescritos) indicam os procedimentos de predição e atualização, respectivamente.

O fluxo básico do Kalman Filter consiste então, basicamente, nas seguintes etapas:
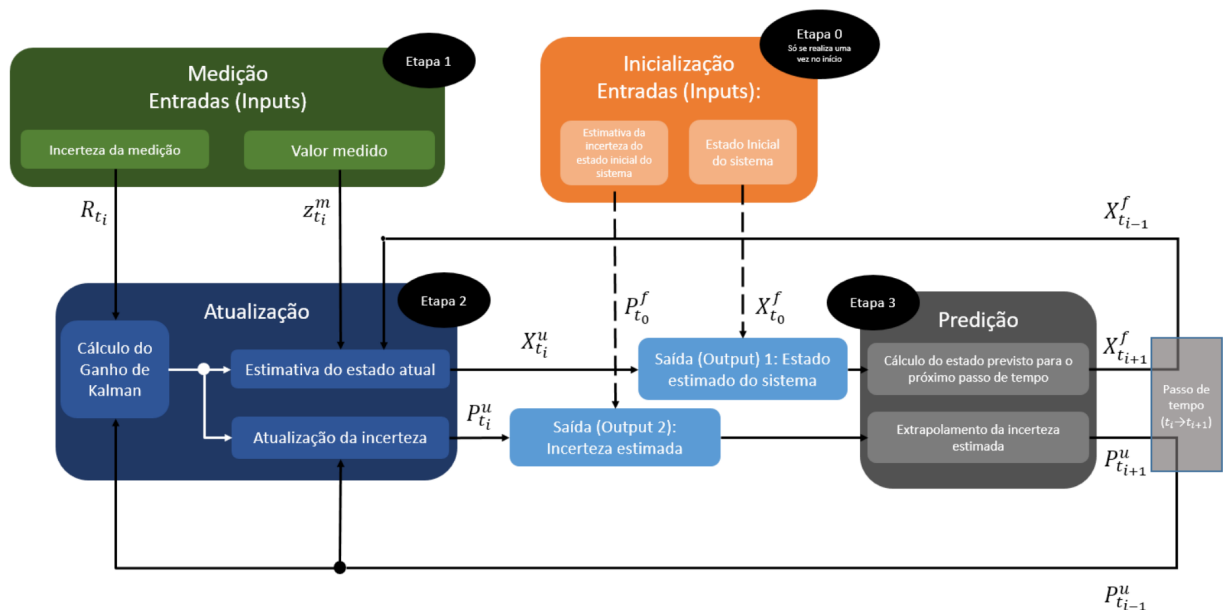
Quadro 3 – Fluxo KF

Fonte: Autor, 2023

Deste modo, é possível definir que a equação (4.7) consiste na etapa de predição no tempo t_i, o modelo de predição dvee ser executado até a realização de uma nova medição e, então, o vetor de medições Z^m é transformado a partir do operador de medições, incorporando os erros de medição (observação) e_2, na equação 4.9. Já na equação (4.10) é realizado o cálculo do Ganho de Kalman que define o peso das componentes estimadas e medidas, ou seja, quanto do dado obtido pela medição será utilizado no cálculo da nova estimativa.

Por fim, pela equação (4.11), o vetor de estados é atualizado com a soma ponderada da estimativa e da inovação e também será atualizada a covariância do erro de estado pela equação (4.12), que deverá ser inferior à covariância estimada anteriormente pela equação (4.8).

4.8 Extended Kalman Filter - EKF

Uma das variações do Kalman Filter é o Kalman Filter Estendido que possui basicamente o mesmo mecanismo do Kalman Filter com a exceção de resolver o problema para sistemas não-lineares. Para realizar tal tarefa, é necessário a obtenção da matriz Jacobiana de cada modelo em cada passo de tempo (KIM; BANG, 2019).

Portanto, este método se difere do Kalman Filter convencional ao obter o estado previsto e a medição prevista a partir de funções não-lineares e, dessa forma, este método lineariza o modelo de estimativa atual (KIM; BANG, 2019).

Contudo, apesar do problema dos vazamentos em redes de distribuição de água possuir a característica de um sistema não-linear, a aplicação do EKF pode levar a divergências, sendo um estimador sub-ótimo (BRAGALLI; FORTINI; TODINI, 2016). Ainda assim, apesar de ser bastante dependente de uma boa estimativa inicial e de uma boa modelagem, esta variação do Kalman Filter é largamente utilizada para abordagens de sistemas não-lineares uma vez que filtros não-lineares ótimos são de difícil gerenciamento (VALIBEYGI; BALAGHI; VIJAYARAGHAVAN, 2017).

4.9 Ensemble Kalman Filter - EnKF

A linearização utilizada pelo EKF, como descrito anteriormente, pode levar a uma estimativa não ótima, sobretudo se houver incorreções na estimativa inicial e na modelagem. Para atenuar este efeito, o EnKF passa a se utilizar da abordagem de Monte Carlo, na medida que o vetor de estados passa a ser substituído por uma matriz de estados composta por um conjunto de vetores obtidos por uma estimativa inicial (FERREIRA, 2020).

Sendo assim, conforme se verifica no trabalho de (RUZZA, 2017), o EnKF tem como princípio que uma função de densidade de probabilidade completa pode ter sua

informação exatamente representada por um conjunto infinito de estados do modelo, de forma que um modelo com N estados de dimensão n, representando, cada um deles, um ponto num espaço de estado n-dimensional, quando N tende ao infinito, estes pontos podem ser representados pela função de densidade de probabilidade a seguir com dN sendo o número de pontos em uma pequena unidade de volume:

$$\phi(x) = \frac{dN}{N} \tag{4.13}$$

O EnKF, portanto, possuirá uma aplicação bastante próxima do KF propriamente dito, com a exceção de que a matriz de covariância do erro no KF para a predição estimada, P^f, é computada pela equação:

$$P^f = \langle (X^f - X) \times (X^f - X)^T \rangle \tag{4.14}$$

Em que P^f denota um valor esperado e é propagado no tempo pela equação 4.8, porém, como o valor real de X é desconhecido, é definida a matriz de covariância do conjunto P_e^f em torno da média do conjunto $\langle X^f \rangle$.

$$\langle X^f \rangle \approx \frac{1}{NMC} \sum_{mc=1}^{NMC} X_{mc}^f \tag{4.15}$$

$$P^f \approx P_e^f = \frac{1}{NMC - 1} \sum_{mc=1}^{NMC} [(X_{mc}^f - \langle X^f \rangle)(X_m c^{f-f})^T] \tag{4.16}$$

Em que, pela nomenclatura adotada por Ruzza (2017), NMC é número total de membros do conjunto e mc é índice do membro do conjunto e o vetor de médias é definido pela equação 4.16. Por conseguinte, é possível compreender que a estimativa mais acurada seria a média do conjunto e uma definição natural do erro na média do conjunto poderia ser descrita como a propagação do conjunto em torno da média.

5 Materiais e métodos

A metodologia deste trabalho foi dividia em duas fases para verificação da eficácia do uso do *Kalman Filter* para detecção e localização de vazamentos.

A primeira fase consistiu na seleção de um sistema de distribuição real da cidade de São José do Rio Preto, no interior estado de São Paulo, que reunisse as características mais favoráveis para a aplicação dos testes, além do levantamento de dados de cadastro (Redes de distribuição, reservatório, válvulas, etc.) e dados operacionais (Micromedição, macromedição, curva da bomba, perfis de consumo, etc.) e a realização da simulação hidráulica da condição operacional do sistema de abastecimento escolhido.

Na segunda fase foi abordada a confecção de algoritmo para aplicação da metodologia aos casos simulados, a coleta dos dados de pressão com dispositivos do tipo *datalogger* e realização de simulações reais de vazamentos em pontos específicos da malha de abastecimento. Por fim, tais dados foram utilizados no modelo construído para a verificação do desempenho da metodologia neste cenário de abastecimento.

5.1 Criação do Modelo no EPANET

Tendo em vista que o objeto de análise primordial desta pesquisa é a aplicação do conceito do *Kalman Filter* em um sistema de abastecimento de água real, as simulações para a fase de prototipagem do software a ser desenvolvido foram realizadas tendo como base informações de um sistema de abastecimento da cidade de São José do Rio Preto, atendido pela autarquia SeMAE (Serviço Municipal Autônomo de Água e Esgoto).

Para a escolha do sistema, foi realizada uma triagem nos sistemas disponíveis tendo como critério:

a) Comprimento total de rede reduzido, uma vez que a aplicação prática será realizada por meio de um número limitado de dataloggers, a escolha de sistemas grandes poderia diminuir excessivamente a representatividade dos dados coletados.

b) Inexistência de interligações entre sistemas para evitar a influência de variáveis desconhecidas.

c) Facilidade de acesso ao hidrômetro, já que os *dataloggers* serão instalados posteriormente nas caixas-padrão ou no hidrômetro, estes não devem estar localizados no interior de edificações ou possuir acesso dificultado (atrás de portões ou muros, por exemplo).

d) Fidelidade do cadastro. Em conversa com os técnicos foram determinados sistemas que tinham uma conhecida e boa correlação entre o cadastro técnico e a rede instalada.

Destes critérios, dois sistemas se sobressaíram, o Harmonia e o Village Flamboyant, porém, o trabalho focou na modelagem do Sistema Village Flamboyant como parâmetro para o código em desenvolvimento já que a topografia com maior declividade do local permitiu uma variação maior de elevação e, consequentemente, zonas de pressão mais bem definidas.

Figura 1 – Ortofoto do Sistema Village Flamboyant

Fonte: SeMAE, 2015
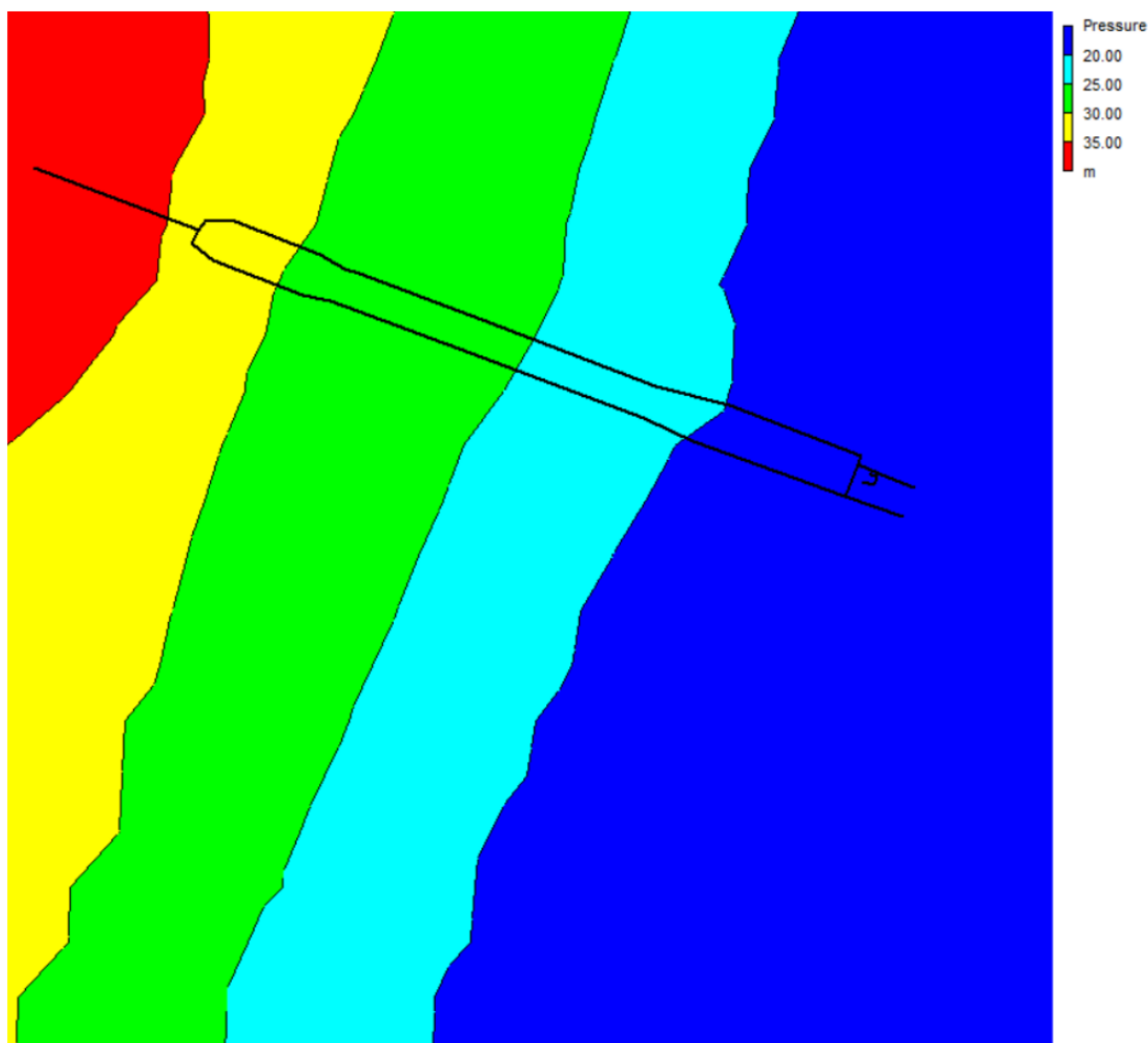
Figura 2 – Zonas de pressão no EPANET

Fonte: Autor, 2023

O sistema Village Flamboyant possui as seguintes características que foram utiliza-das para o cálculo da simulação no EPANET:

a) Ligações: 68

b) Comprimento de rede: 1518m

c) Poço: PTB-341, Leão R20A-12 (instalada à 85m aproximadamente), com vazão de 22.8m3/h.

d) Reservatório: do tipo elevado com 16 metros de altura máxima e 10 metros de altura mínima e 4 metros de diâmetro.

e) Demanda Média: 7,2m^3/hora

f) Perfil de demanda: Residencial Padrão

Após a inserção dos dados no EPANET foi gerado o modelo que pode ser ilustrado pela Figura 3:
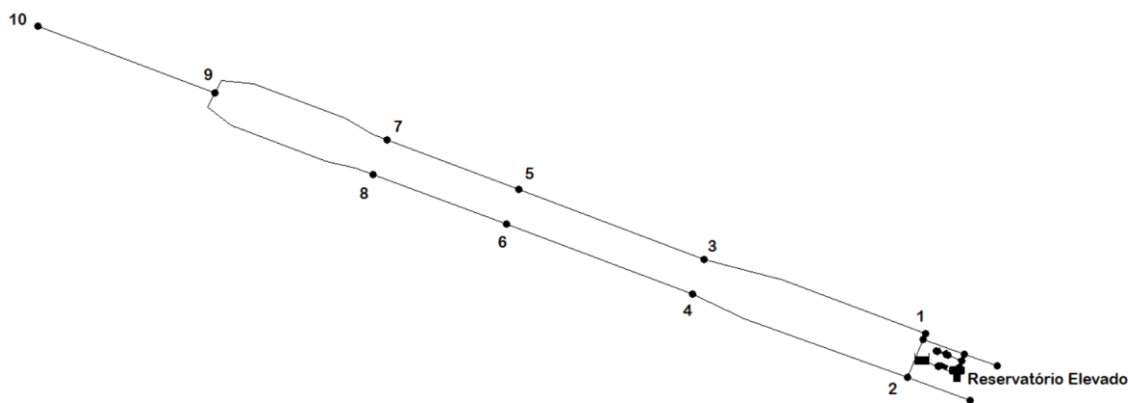
Figura 3 – Modelo Epanet do Sistema Village Flamboyant

Fonte: Autor, 2023

Posteriormente, este modelo foi exportado para um arquivo do tipo .INP e foi realizada a distribuição das demandas em cada nó através da divisão do valor médio micromedido total de forma ponderada em relação ao comprimento de rede à que cada nó está ligado.

Figura 4 – Memória de cálculo das demandas por metro de rede atribuído aos nós

Fonte: Autor, 2023

O arquivo já com as demandas distribuídas foi copiado para um segundo arquivo em que serão simuladas medições dos *datalogger* criando-se uma variação gaussiana aleatória em torno de um erro de 0.01 no código em *Python* posteriormente, representando as perturbações de sinal/ruídos do transdutor de pressão utilizado. Para retratar o perfil de consumo da população deste bairro foram utilizados os dados horários de vazão da

distribuição de agosto de 2020 à julho de 2021 do reservatório e, através da média, traçado o seguinte *Pattern* de demanda para o EPANET:
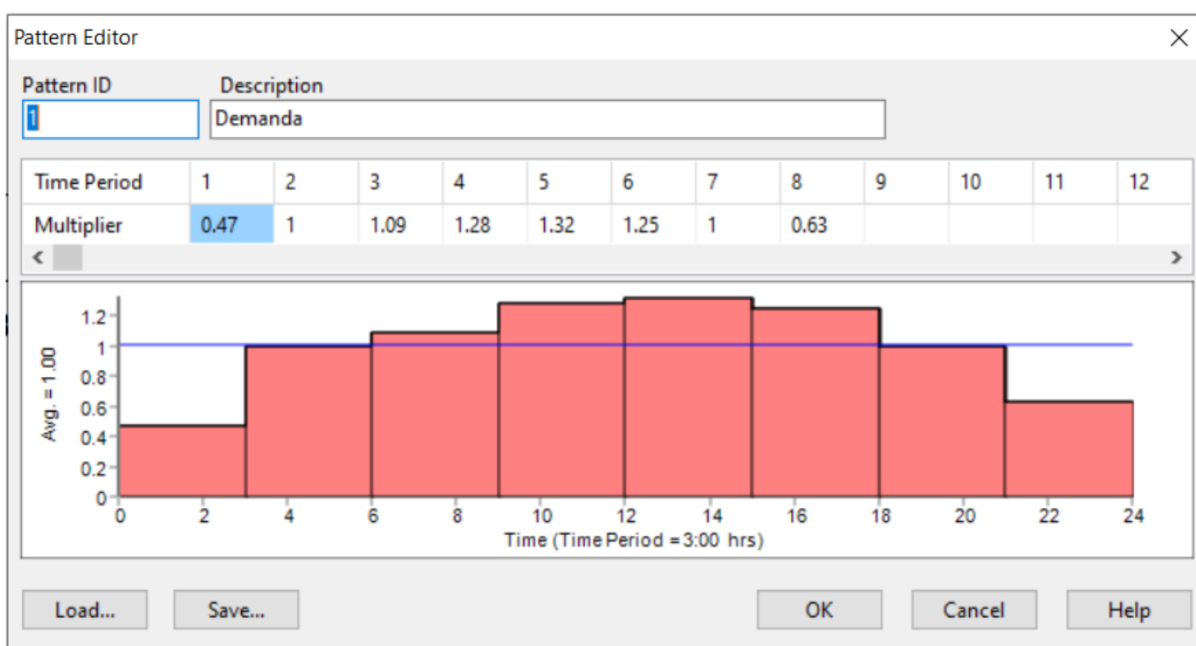
Figura 5 – Padrão de Demanda para o Sistema Village Flamboyant
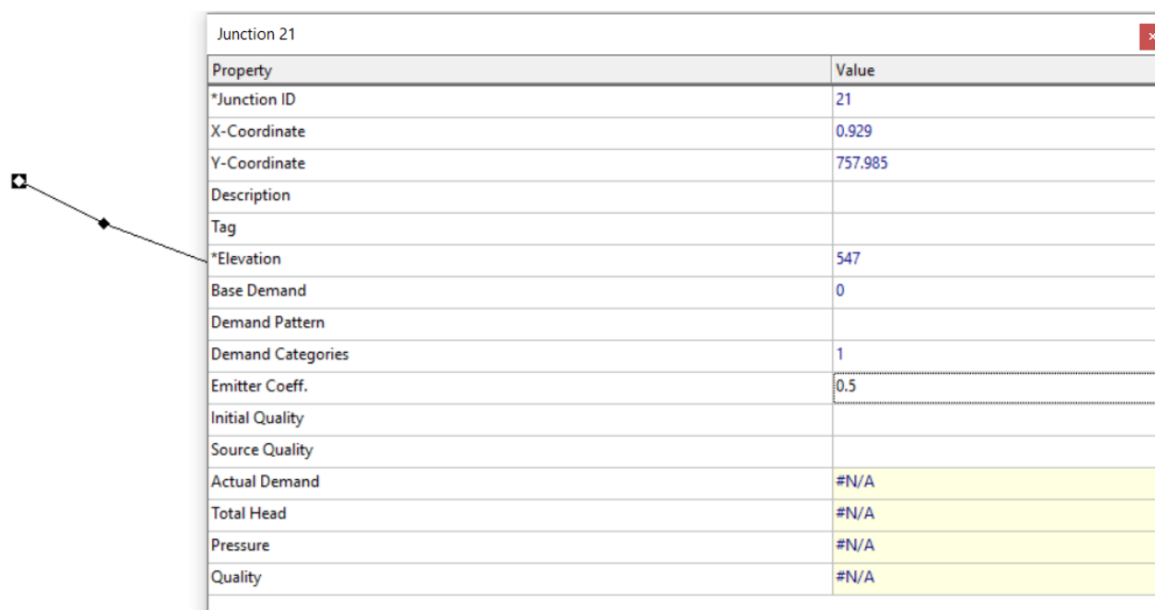
Fonte: Autor, 2023

Com o objetivo de simular um vazamento em um dos nós do bairro, foi criado um nó adicional (nó 21) após o nó 10 e nele foi configurado um emitter apenas no arquivo contendo as medições simuladas com um coeficiente de valor 0.5. Um emitter no EPANET permite a simulação, entre outros cenários, de uma perda real em um nó da simulação. Segundo o Epanet 2.0 - Manual do Usuário (ROSSMAN, 2000), "a vazão que sai do dispositivo emissor varia como uma função da pressão disponível no nó" e tal fenômeno se expressa pelo produto do coeficiente de vazão pela pressão no nó elevada a um expoente. É justamente esse expoente que será inserido no campo (Emitter Coeff.) do nó 21 para representar a intensidade deste vazamento e, apesar deste valor ter uma variação desconhecida, o coeficiente de um vazamento comumente varia entre 0,5 (pequeno vazamento) e 2 (rompimento de rede).

5.2 Desenvolvimento do Algoritmo e do Código em *Python*

Para o início da aplicação prática do *Kalman Filter* na problemática das perdas reais em redes de abastecimento de água, se torna necessário traduzir os conceitos matemáticos demonstrados até o momento, para uma linguagem de programação que permita a criação de uma rotina de cálculo a partir dos dados obtidos em campo.

Com esse objetivo, foi utilizada a linguagem *Python*, por conta de algumas de suas características, tais como: comunidade muito ativa – o que proporciona uma boa

Figura 6 – Coeficiente *"emitter"* para simulação do vazamento

Fonte: Autor, 2023

quantidade de bibliotecas para operações matemáticas e uma quantidade muito expressiva de material disponível, tornando-a uma linguagem inclusiva; rápida curva de aprendizado, o que permite que profissionais que não são especificamente da área de computação possam compreender e aplicar códigos, uso massivo de *Python* em programas de Geoprocessamento – as plataformas mais utilizadas no mundo se utilizam do *Python* como sua principal linguagem (*Core Language*) e há uma óbvia relação entre o trabalho que está sendo desenvolvido e aplicações SIG como Qgis e ArcGis que possuem módulos para modelagem hidráulica de forma especializada, com o motor do EPANET.

O desenvolvimento desse algoritmo passou por algumas etapas:

a) Compreensão do *software* EPANET desenvolvido em C e identificação de métodos para extração dos dados e importação para o código *Python*;

b) Tratamento dos dados e formatação para utilização na aplicação do *Kalman Filter*;

c) Desenvolvimento do filtro e seus blocos em *loop* de Estimativa (*Predict*) e Atualização (*Update*);

d) Plotagem dos dados de forma visualmente inteligível;

e) Análise dos dados.

5.2.1 Compatibilizando dados EPANET e *Python*

Após extensa pesquisa, foi possível encontrar um trabalho muito bem executado através da API *EpanetTools* (Assela Pathirana, 2015) que possibilita a realização desta tarefa de portar os dados entre as duas plataformas. Apesar dessa etapa não possuir ligação direta com o objeto deste trabalho, a inexistência desta ferramenta poderia desencorajar quem desejasse criar soluções baseadas em *Python*.

A API citada tira proveito do módulo *Epanet Programmers Toolkit* (USEPA) que expõe funções do *CORE* do programa para serem utilizadas externamente, a API então, acessa essas funções e importa os dados para o *Python*. Por conta da sua fácil utilização, para essa etapa foi utilizada a API *EpanetTools* com o seguinte código que permite a importação dos arquivos .INP gerados pelo EPANET:

```
from epanettools.epanettools import EPANetSimulation, Node

#Carregando Simulação
es-EPANetSimulation(Caminho_do_arquivo)
es.run()
```

Durante a etapa de prototipagem, o modelo do EPANET gerado para o sistema de abastecimento foi utilizado como Modelo do Processo. Além disso, o mesmo modelo teve seus valores modificados por um erro teórico aleatório com distribuição normal sobre a acurácia de 0.1, permitindo a verificação do desempenho dos valores estimados pelo filtro em relação aos valores simulados pelo modelo do EPANET.

5.2.2 Estrutura do Algorítimo para Prototipagem

(1) Carregue os Dados da Simulação do EPANET referente aos 24 valores de pressão de 10 nós do sistema de abastecimento de água (Modelo do Processo).

(2) Reutilize os dados carregados aplicando uma distribuição normal do erro do modelo para representação dos valores medidos (Z_m).

(3) Inicialização:

(3.1) Defina o Estado Inicial baseado nos dados iniciais do EPANET ($X_{t_i}^u$).

(3.2) Defina a Covariância do Erro Inicial ($P_{t_i}^u$).

(3.3) Defina a Matriz de Transição de Estados (A) que será uma matriz identidade (A_8) uma vez que a simulação do EPANET já define a dinâmica de transição em cada passo de tempo diretamente pelo resultado da própria simulação hidráulica.

(3.4) Defina a Matriz de Medição (M) que será uma matriz identidade (M_8) uma vez que o parâmetro estimado é o mesmo parâmetro medido, com relação, portanto, de 1:1. Tecnicamente, poderia ser ignorada, mas sua inclusão facilita a legibilidade do processo. A Matriz teria relação diferente em caso de medições indiretas como a medição de pressão para verificação do nível de um reservatório cilíndrico, por exemplo.

(3.5) Defina a Matriz de Covariância do Erro da Estimativa (P), inicializada com um valor ((P_8) e atualizada em cada etapa.

(3.6) Defina a Matriz de Covariância do Erro do Modelo (W), que será uma matriz identidade multiplicada pelo Erro.

(3.7) Defina a Matriz de Covariância do Erro da Medição (R), que será uma matriz identidade multiplicada pelo Erro.

(4) Predição:

(4.1) Estado a priori: $X_{t_i}^f = AX_{t_{i-1}}^u + e_{1t_i}$

(4.2) Covariância do erro a priori: $P_{t_i}^f = AP_{t_{i-1}}^u A^T + W_{t_i}$

(5) Atualização:

(5.1) Calcule o Residual: $Y_{t_i} = Z_{t_i} - AX_{t_{i-1}}^u$

(5.2) Calcule o Ganho de Kalman: $K_{t_i} = P_{t_i}^f M^T (MP_{t_i}^f M^T + R_{t_i})^{-1}$

(5.3) Atualize a estimativa do estado: $X_{t_i}^u = X_{t_i}^f + K_{t_i}(Z_{t_i}^m - MX_{t_i}^f)$

(5.4) Atualize a covariância do erro do estado (a posteriori): $P_{t_i}^u = (I - K_{t_i}M)P_{t_i}^f$

(6) Residual Normalizado:

(6.1) Calcule o Residual Normalizado usando os residuais brutos de cada etapa: $Y^n = Y^b/Z$

5.2.3 Tratamento dos dados em *Python*

Para que os valores obtidos pudessem ser utilizados de forma inteligível durante as etapas do loop do filtro, os dados foram inseridos em variáveis adequadas.

```python
import numpy as np
import matplotlib.pyplot
from epanettools.epanettools import EPANetSimulation, Node

'''
Inicializando Variáveis Básicas
'''
```

```python
8
9  h = 24   # Número de horas
10 n = 10    # Número de nós de monitoramento
11
12 '''
13 Valores de pressão na Simulação do EPANET. A simulação trata de leituras
       de pressão em 8 nós de um determinado sistema de abastecimento de á
      gua em 24 horas (um valor por hora)
14 '''
15 S = [[] for _ in range(n)]
16 M = [[] for _ in range(n)]
17
18 #Carregando Simulação
19 file_s = 'C:/Users/Disforme Podcast/Documents/UFSCAR/Dissertação/
      KalmanNetwork/data/flamboyant.inp'
20 es=EPANetSimulation(file_s)
21 es.run()
22
23 # Passo de tempo do modelo
24 tstep = list(es.network.time)
25
26 # Parâmetro utilizado do modelo do EPANET
27 p = Node.value_type['EN_PRESSURE']
28
29 for node in range(n):
30     nid = node + 1
31     results = es.network.nodes[nid].results[p]
32     hour = 0
33     for simHour in range(len(tstep)):
34         t = (tstep[simHour]) / 3600
35         if t.is_integer() and hour < 24:
36             S[node].append(round(results[int(t)], 2))
37             M[node].append(round(np.random.normal(results[int(t)], 0.1),
                 2))
38             hour += 1
39
40 S = np.array(S)
41
42 M = np.array(M)
43
44 '''
45 Outras matrizes necessárias
46 '''
47
48 A = np.eye(n)     # Matriz de Transição de Estados
49 Z = np.eye(n)     # Matriz de Observação
50 W = np.eye(n) * 0.001   # Matriz de covariância do ruído de processo (
```

```
        erro do modelo)
51 R = np.eye(n) * 0.01     # Matriz de covariância do ruído de Medição (
        erro da medição)
52 B = np.eye(n)   #Matriz de controle
53
54 '''
55 Inicialização
56 '''
57
58 X = S[:, 0]  # Estado inicial
59 P = np.eye(n) * 1.0  # Covariância inicial
60
61 '''
62 Matrizes para o armazenamento de estimativas e residuais
63 '''
64
65 estimates = np.zeros((n, h))
66 residuals = np.zeros((n, h))
```

É importante notar que a Matriz de Transição de Estados (A) será uma matriz identidade uma vez que a simulação do EPANET já define a dinâmica de transição em cada passo de tempo diretamente pelo resultado da própria simulação hidráulica e a matriz de observação (Z) será uma matriz identidade porque o parâmetro estimado é o mesmo parâmetro medido, com relação, portanto, de 1:1. Tecnicamente, A poderia ser ignorada, mas sua inclusão facilita a legibilidade do código e do processo. A matriz teria relação diferente em caso de medições indiretas como a medição de pressão para verificação do nível de um reservatório cilíndrico, por exemplo.

Além disso, a Matriz de Controle (B) será utilizada para inserir os valores da simulação como parâmetro para a predição do estado de forma que os valores simulados tenham peso na ponderação das estimativas.

5.2.4   Filtro de Kalman (*Loop Predict/update*)

Neste bloco foi criado o laço de repetição para a realização dos cálculos iterativos do *Kalman Filter* explicados anteriormente de forma que à cada passo de tempo os valores do ganho de Kalman (k) sejam atualizados e aplicados para a geração da previsão seguinte, além do cálculo do valor residual resultante.

```
1 '''
2 Loop através das horas - Iterando através das horas, considerando as 24
    horas de análise no sistema de abastecimento de água.
3 '''
4
```

```python
for t in range(h):
    '''
    ---ENTRADA DE CONTROLE---
    Diferença entre os valores da simulação atual e anterior. Este passo
        define a variação de entrada que será usada para a predição de
        estado.
    '''

    u = S[:, t] - S[:, t - 1] if t > 0 else np.zeros(n)

    '''
    ---Predição---
    x_pred representa a estimativa de estado, usando a matriz de transiç
        ão (A), estado atual (X) e a entrada de controle (u). p_pred é a
        predição da covariância do estado, considerando o ruído do
        processo (W).
    '''

    x_pred = A @ X + B @ u
    p_pred = A @ P @ A.T + W

    '''
    ---Atualização---
    a) residual é a diferença entre as medições (M) e a predição da
        observação (Z @ x_pred).
    b) residual_normalized normaliza o residual pela medição, fornecendo
        uma comparação percentual.
    c) residual_covariance é a covariância do residual, considerando a
        predição da covariância do estado (p_pred) e o ruído da medição (
        R).
    d) K é o ganho de Kalman, que otimiza a combinação das estimativas e
        medições.
    e) X é Estado
    f) P é a Matriz de Covariância
    '''

    residual = M[:, t] - Z @ x_pred
    residual_normalized = np.round(np.abs(residual) / M[:, t], 4)
    residual_covariance = Z @ p_pred @ Z.T + R
    K = p_pred @ Z.T @ np.linalg.inv(residual_covariance)
    # Atualizando o estado (X) e a matriz de covariância (P) do sistema
    X = x_pred + K @ residual
    P = (np.eye(n) - K @ Z) @ p_pred

    # Armazenando as estimativas do estado para cada instante de tempo
    estimates[:, t] = X
```

```
42     # Armazenando os resíduos normalizados para cada instante de tempo
43     residuals[:, t] = residual_normalized
44
45
46 # Transformando os resíduos em uma matriz
47 residuals_matrix = np.array(residuals)
```

5.2.5   Plotagem dos dados

O próximo bloco de código tem como função apenas "plotar" os dados de forma gráfica, permitindo uma melhor visualização do efeito produzido pelo filtro. Nesta etapa, os dados ainda estão sendo demonstrados através de uma consulta em um nó específico, neste caso o nó 10.

```
1 fig, chart = matplotlib.pyplot.subplots()
2
3 chart2 = chart.twinx()
4 med = chart.plot(M[9], color='black', label='medição')
5 est = chart.plot(estimates[9], color='blue',label='estimativas')
6 res = chart2.plot(residuals[9], color='red', label='residual')
7
8 leg = sim+est+res
9 labs = [l.get_label() for l in leg]
10 chart.legend(leg, labs, bbox_to_anchor=(0.5, 1), loc='upper center')
11
12 chart.set_xlabel('Horas')
13 chart.set_ylabel('Pressão(mca)')
14 chart2.set_ylabel('Residual')
15
16 matplotlib.pyplot.show()
```

5.3   Análise dos dados

Para verificação da capacidade de ajuste do filtro, foi gerado um gráfico em que é possível verificar a relação entre o filtro e os valores simulados e os valores da simulação com o ruído correspondente à medição de sensores de pressão.

Contudo, para que seja possível comparar a dimensão da variação entre o previsto e o medido neste e nos demais nós, é preciso normalizar este valor, operação que é realizada através da divisão da diferença do estimado menos o medido pelo estimado. Este dado é chamado de residual e o monitoramento desta variável poderá indicar de forma mais específica - em um *software* SIG, por exemplo – uma aproximação do local com maior probabilidade de vazamentos.

Conforme fica claro na figura 7, o filtro tem uma boa capacidade de ajuste, fornecendo bons resultados mesmo com a adição do ruído gaussiano nas medições, possuindo valores residuais próximos de 0.006 no máximo. Na sequência, o programa foi executado
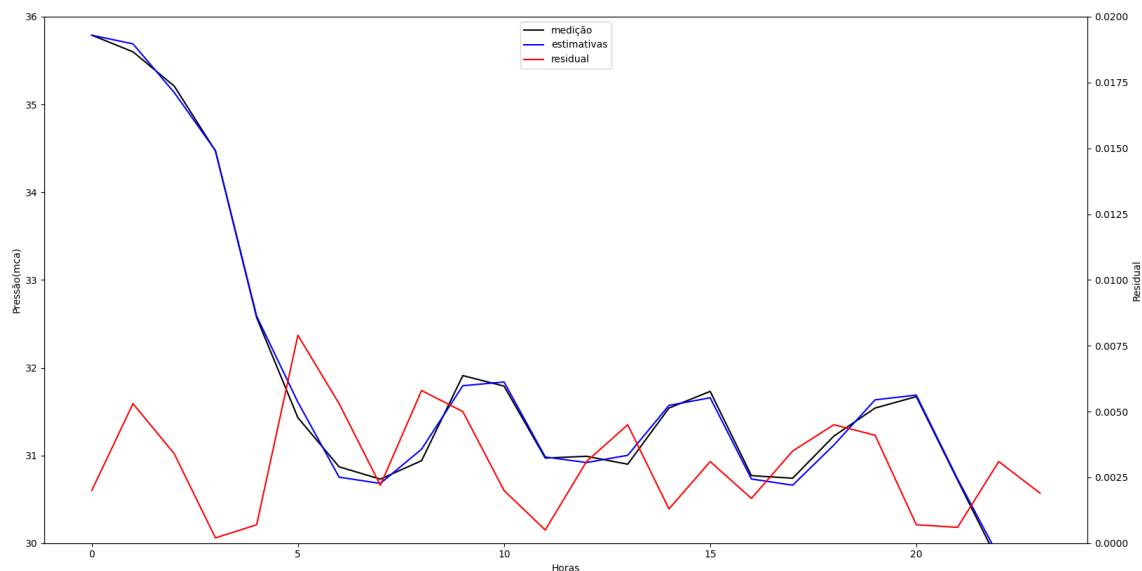
Figura 7 – *Kalman Filter* sem vazamentos

Fonte: Autor, 2023

novamente, porém agora com o emitter ativado à partir das 15 horas no arquivo que simula as medições em campo. A figura 8 demonstra o efeito deste vazamento na execução do *Kalman Filter*.
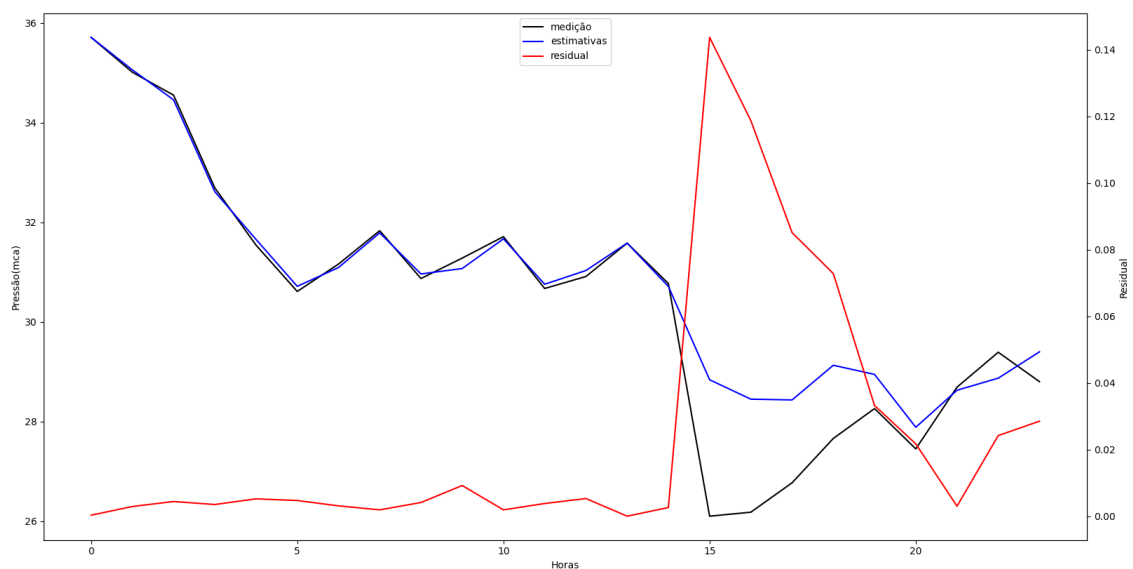
Figura 8 – *Kalman Filter* com vazamento ("emitter")

Fonte: Autor, 2023

Como se verifica, a queda de pressão causada pelo vazamento impacta de forma inversa no residual que ultrapassa o valor de 0,14, exigindo uma correção mais agressiva do

Kalman Filter que tende a se aproximar mais do modelo cujo erro é mais baixo (0,001) do que da medição (0,01). Portanto, a partir da aplicação teórica do algoritmo é que se torna verossímil a hipótese de aplicação simultânea em todos os nós, que deverão apresentar distanciamentos entre a simulação e a medição maiores quanto mais próximo do evento causador do distúrbio.

5.4 Aplicação do método em dados reais

Utilizando o produto final da etapa de desenvolvimento e testagem do software, foi planejada e realizada a coleta de dados no Sistema Village Flamboyant esta etapa pode ser subdividida em duas partes principais: a montagem e programação de dispositivos para coleta e armazenamento dos dados de pressão em campo (datalogger), aplicação dos dados coletados no software e a confecção de um mapa temático que possibilite a visualização georreferenciada dos dados e a determinação da área provável do vazamento no sistema em análise.

Após a definição dos pontos de medição exatos para oito equipamentos datalogger, o modelo do EPANET foi ajustado para expressar corretamente a exata posição destes nós, repetindo-se o processo de alocação de demandas neste cenário.
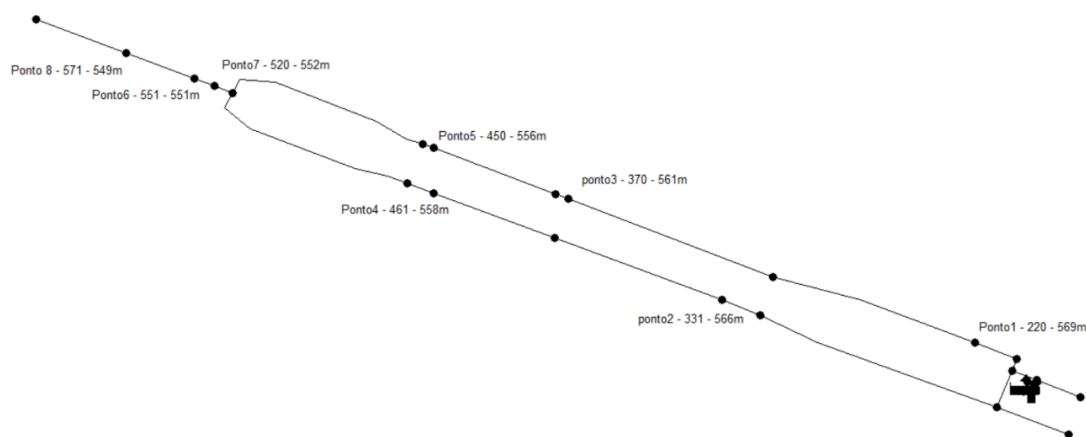
Figura 9 – Novo cenário EPANET

Fonte: Autor, 2023

5.4.1 Montagem e programação dos *dataloggers*

Para a realização da tarefa de coleta e armazenamento dos dados em campo foram escolhidos os seguintes componentes para utilização em cada um dos 8 equipamentos montados:

•

Figura 10 – ESP32 (TTGO Lilygo T3 - v1.6.6 com leitor de cartão microSD)

Fonte: Autor, 2023

Figura 11 – Invólucro IP68

Fonte: Autor, 2023

Figura 12 – Transdutor de pressão 0,5 a 4,5v com Range de 0 a 1,2Mpa

Fonte: Autor, 2023

Figura 13 – Bateria de li-ion Modelo 18650 3,7v 2600mAh

Fonte: Autor, 2023

Figura 14 – Cartão de memória microSD 2Gb

Fonte: Autor, 2023

Cada unidade dos 8 equipamentos tiveram seus terminais e cabos soldados e revestidos com tubo isolante termoretrátil a fim de garantir a segurança do equipamento contra curtos e interferências nas leituras. Os sensores de pressão tiveram seus cabos soldados nos pinos 3.3v, GND e GPIO34 para a leitura de sinal, as baterias foram conectadas através da porta de alimentação JST nativa deste modelo do ESP32 e foi instalado um botão na GPIO23 com a finalidade de ligar e desligar o sistema WiFi nativo da placa, a fim de preservar a capacidade da bateria.

Cada *datalogger* recebeu um pequeno arquivo HTML (index.html) que pode ser verificado no Apêndice J, que serviu como interface para iniciar/parar a coleta, apagar dados existentes no cartão de memória e verificar *in loco* uma tabela com as leituras já realizadas. Esta página foi servida por meio de um *webserver* simples na programação do ESP32.

As placas ESP32 utilizadas foram programadas com a utilização da plataforma ARDUINO-IDE com a inclusão de bibliotecas necessárias, definição dos pinos do leitor de cartão microSD e dos demais periféricos (transdutor de pressão, botão liga/desliga, *WiFi* e *led* indicativo), conforme descrito no Apêndice K. Também são definidas as configurações de acesso de uma rede *WiFi* externa (que foi utilizada para sincronizar o relógio de tempo real - RTC interno da placa) e do acesso à rede própria do ESP32 (*Access Point*) que irá permitir o acesso ao *WebServer*.

Além disso, foram definidas as configurações NTP (Servidor para sincronização do RTC), o nome do arquivo que será gerado com as leituras, a inicialização do *webserver* na porta 80, e os estados iniciais da variável de controle do processo de registro, da variável de

controle do estado do *access point* e da variável de controle do intervalo entre as leituras. Estas variáveis de controle serão utilizadas posteriormente para determinar o estado de funções que serão descritas para cada uma destas tarefas.

Posteriormente, foram criadas as funções que realizam a gravação dos dados no cartão de memória e apagam os dados existentes e a função que aciona ou interrompe o *WiFi* quando o botão é pressionado por mais de 5 segundos. Esta função é importante para preservar a capacidade da bateria, uma vez que os componentes do sistema *WiFi* da placa podem consumir uma quantidade significativa de energia, podendo acarretar na interrupção do registro de dados antes do planejado.

Por fim, na função *loop*, resta monitorar o estado do botão chamando a função "btn5sec" e realizar a leitura a cada 60000ms (1 minuto) caso o estado da variável "logging" seja verdadeiro, conforme a Estrutura do Algoritmo:

(1) Inicialização:

    (1.1) Definir as credenciais do Wi-Fi e servidor NTP.

    (1.2) Configure o servidor web na porta 80.

    (1.3) Inicialize variáveis para controle de estados (logging e Access Point (AP)).

    (1.4) Inicie a comunicação serial.

    (1.5) Configure os pinos do LED, sensor de pressão e botão.

    (1.6) Inicialize o cartão SD.

    (1.7) Inicialize o RTC (Relógio de Tempo Real) e sincronizar com o servidor NTP através da rede Wi-Fi.

    (1.8) Defina os *endpoints* do servidor web, como "/"para o HTML principal, "/control"para controle de *logs*, "/clearData"para apagar os dados, etc.

(2) Loop principal:

    (2.1) Função btn5sec: Verificar se o botão foi pressionado por 5 segundos, se positivo, Ligue o WiFi, se negativo, continue.

    (2.2) Função Control: Se a variável de registro for verdadeira, registrar os dados do sensor de pressão em intervalos de 1 minuto em um arquivo no Cartão SD.

    (2.3) Adicione um atraso de 100ms no final do *loop*.

Após a montagem dos *dataloggers*, os equipamentos foram instalados em 8 pontos da rede em cavaletes e caixas padrão que permitiam a instalação com maior facilidade de acesso. Para isso, foi realizada a substituição do cotovelo antes do hidrômetro por um "tê" onde foi instalado o transdutor de pressão.

Figura 15 – Instalação de datalogger no sistema Village Flamboyant

Fonte: Autor, 2023

Após a fixação de cada equipamento, este era acessado pela rede *WiFi* e era iniciado o processo de coleta de dados a cada 1 minuto.

Figura 16 – Conexão com o datalogger e início da coleta

Fonte: Autor, 2023

5.4.2 Coleta de dados e aplicação no algoritmo

Os equipamentos foram instalados entre as 15 e às 16 horas do dia 13 de março de 2023 e foram removidos no mesmo horário no dia 15 de março de 2023. Contudo, as leituras consideradas para o estudo foram as compreendidas entre às 00:00 e às 23:59 do dia 14 de março de 2023, ou seja, 1 ciclo completo de 24 horas. No dia 14 de março de 2023, das 15 horas às 16 horas foi realizada a abertura do registro do terminal de limpeza da rede de distribuição localizado na cota mais baixa do bairro a fim de simular a existência de um vazamento e, gerar uma perturbação correspondente nas leituras de todos os dispositivos instalados.

Subsequentemente, após a remoção dos equipamentos, os cartões de memória foram descarregados e os arquivos com as leituras foram utilizados para a consolidação da pressão média em cada ponto, em cada horário e estes dados foram inseridos no algoritmo no lugar dos valores de medição simulados anteriormente.

Estrutura final do algoritmo:

(1) Carregue os Dados da Simulação do EPANET referente aos 24 valores de pressão de 8 pontos de monitoramento do sistema de abastecimento de água (Modelo do Processo).

(2) Carregue os dados medidos nos mesmos 8 pontos em 24 horas (Z_m).

(3) Inicialização:

   (3.1) Defina o Estado Inicial baseado nos dados iniciais do EPANET ($X_{t_i}^u$).

   (3.2) Defina a Covariância do Erro Inicial ($P_{t_i}^u$).

   (3.3) Defina a Matriz de Transição de Estados (A) que será uma matriz identidade (A_8) uma vez que a simulação do EPANET já define a dinâmica de transição em cada passo de tempo diretamente pelo resultado da própria simulação hidráulica.

   (3.4) Defina a Matriz de Medição (M) que será uma matriz identidade (M_8) uma vez que o parâmetro estimado é o mesmo parâmetro medido, com relação, portanto, de 1:1. Tecnicamente, poderia ser ignorada, mas sua inclusão facilita a legibilidade do processo. A Matriz teria relação diferente em caso de medições indiretas como a medição de pressão para verificação do nível de um reservatório cilíndrico, por exemplo.

   (3.5) Defina a Matriz de Covariância do Erro da Estimativa (P), inicializada com um valor ((P_8) e atualizada em cada etapa.

   (3.6) Defina a Matriz de Covariância do Erro do Modelo (W), que será uma matriz identidade multiplicada pelo Erro.

(3.7) Defina a Matriz de Covariância do Erro da Medição (R), que será uma matriz identidade multiplicada pelo Erro.

(4) Predição:

(4.1) Estado a priori: $X_{t_i}^f = AX_{t_{i-1}}^u + e_{1t_i}$

(4.2) Covariância do erro a priori: $P_{t_i}^f = AP_{t_{i-1}}^u A^T + W_{t_i}$

(5) Atualização:

(5.1) Calcule o Residual: $Y_{t_i} = Z_{t_i} - AX_{t_{i-1}}^u$

(5.2) Calcule o Ganho de Kalman: $K_{t_i} = P_{t_i}^f M^T (MP_{t_i}^f M^T + R_{t_i})^{-1}$

(5.3) Atualize a estimativa do estado: $X_{t_i}^u = X_{t_i}^f + K_{t_i}(Z_{t_i}^m - MX_{t_i}^f)$

(5.4) Atualize a covariância do erro do estado (a posteriori): $P_{t_i}^u = (I - K_{t_i}M)P_{t_i}^f$

(6) Residual Normalizado:

(6.1) Calcule o Residual Normalizado usando os residuais brutos de cada etapa: $Y^n = Y^b/Z$

No código é possível verificar as listas com os valores médios de pressão para cada ponto em cada horário obtidos pelos *dataloggers*. Além disso, foi utilizada a biblioteca "Panda" para a criação de uma tabela *".xlsx"* com os valores residuais de cada ponto em cada horário que depois foi utilizada como fonte de dados para a criação do mapa temático.

Posteriormente, os dados coletados em campo foram alocados na lista definida anteriormente como *"M"*.

```python
import numpy as np
from   epanettools.epanettools import EPANetSimulation, Node

'''
Inicializando Variáveis Básicas
'''


h = 24   # Número de horas
n = 8    # Número de nós de monitoramento


'''
Valores de pressão na Simulação do EPANET. A simulação trata de leituras
    de pressão em 8 nós de um determinado sistema de abastecimento de á
    gua em 24 horas (um valor por hora)
'''
S = [[] for _ in range(n)]

#Carregando Simulação
```

```
17 file_s = 'C:/Users/Disforme Podcast/Documents/UFSCAR/Dissertação/
       KalmanNetwork/data/loggerFlamboyant24.inp'
18 es=EPANetSimulation(file_s)
19 es.run()
20
21 # Passo de tempo do modelo
22 tstep = list(es.network.time)
23
24 # Parâmetro utilizado do modelo do EPANET
25 p = Node.value_type['EN_PRESSURE']
26
27 for node in range(n):
28     nid = node + 1
29     results = es.network.nodes[nid].results[p]
30     hour = 0
31     for simHour in range(len(tstep)):
32         t = (tstep[simHour]) / 3600
33         if t.is_integer() and hour < 24:
34             S[node].append(round(results[int(t)], 2))
35             hour += 1
36
37 S = np.array(S)
38
39 M = np.array([
40     [18.44, 18.17, 18.07, 17.92, 17.79, 17.4, 16.92, 15.91, 15.4, 15.61,
         15.49, 15.09, 16.2, 14.79, 15.71, 15.2, 15.8, 17.95, 17.34,
         18.44, 18.29, 17.89, 16.65, 17.82], [21.92, 21.76, 21.57, 21.43,
         21.26, 20.88, 19.63, 17.95, 18.22, 19.75, 17.62, 18.42, 18.24,
         20.51, 16.26, 17.2, 17.41, 21.37, 19.07, 21.78, 21.55, 21.28,
         20.98, 21.65], [26.48, 26.29, 26.18, 26.02, 25.44, 22.03, 21.76,
         25.43, 21.74, 23.49, 21.86, 22.1, 21.55, 24.39, 22.91, 20.05,
         21.09, 25.77, 25.3, 26.46, 26.22, 25.84, 25.56, 26.28], [29.28,
         29.2, 29.12, 28.99, 28.76, 28.24, 28.71, 27, 24.75, 26.55, 27.16,
          26.21, 28, 28.39, 26.69, 23.41, 24.34, 28.63, 26.66, 29.22,
         29.08, 28.51, 28.41, 29.27], [30.9, 30.69, 30.52, 30.44, 30.35,
         30.01, 29.66, 28.96, 30.27, 27.55, 29.63, 29.65, 27.7, 31.69,
         31.01, 25.09, 26.84, 30.18, 29.58, 30.4, 30.65, 30.3, 30.01,
         30.23], [38.13, 38.03, 37.89, 37.78, 37.62, 37.03, 37.05, 36.05,
         34.33, 35.9, 32.48, 30.93, 32.98, 37.94, 32.37, 28.27, 35.33,
         37.47, 36.79, 37.59, 37.56, 37.44, 37.18, 36.66], [39.32, 39.44,
         39.29, 39.06, 38.9, 38.32, 38.3, 33.85, 32.42, 33.75, 32.17,
         31.31, 32.77, 31.81, 31.34, 27.52, 34.34, 39.06, 38.38, 39.36,
         38.85, 39.23, 38.52, 39.15], [39.54, 39.41, 39.32, 39.16, 39.06,
         38.48, 38.56, 34.21, 34.58, 37.01, 34.86, 39.56, 38.7, 36.82,
         35.35, 29.29, 33.06, 38.81, 38.32, 39.06, 39.29, 38.88, 38.72,
         39.14]
41 ])
```

```python
42
43 '''
44 Outras matrizes necessárias
45
46 Observações:
47
48 a) A Matriz de Transição de Estados (F) será uma matriz identidade uma
      vez que a simulação do EPANET já define a dinâmica de transição em
      cada passo de tempo diretamente pelo resultado da própria simulação
      hidráulica.
49
50 b) A matriz de observação (H) será uma matriz identidade porque o parâ
      metro estimado é o mesmo parâmetro medido, com relação, portanto, de
      1:1. Tecnicamente, H poderia ser ignorada, mas sua inclusão facilita
      a legibilidade do código e do processo. A matriz teria relação
      diferente em caso de medições indiretas como a medição de pressão
      para verificação do nível de um reservatório cilíndrico, por exemplo.
51
52 c) A Matriz de Controle (B) será utilizada para inserir os valores da
      simulação como parâmetro para a predição do estado de forma que os
      valores simulados tenham peso na ponderação das estimativas.
53 '''
54
55 F = np.eye(n)    # Matriz de Transição de Estados
56 H = np.eye(n)    # Matriz de Observação
57 Q = np.eye(n) * 0.0001  # Matriz de covariância do ruído de processo (
      erro do modelo)
58 R = np.eye(n) * 0.01    # Matriz de covariância do ruído de Medição (
      erro da medição)
59 B = np.eye(n)    #Matriz de controle
60
61 '''
62 Inicialização
63 '''
64
65 X = S[:, 0]  # Estado inicial
66 P = np.eye(n) * 1.0  # Covariância inicial
67
68 '''
69 Matrizes para o armazenamento de estimativas e residuais
70 '''
71
72 estimates = np.zeros((n, h))
73 residuals = np.zeros((n, h))
74
75 '''
76 Loop através das horas - Iterando através das horas, considerando as 24
```

```
        horas de análise no sistema de abastecimento de água.
77  '''
78
79  for t in range(h):
80      '''
81      ---ENTRADA DE CONTROLE---
82      Diferença entre os valores da simulação atual e anterior. Este passo
            define a variação de entrada que será usada para a predição de
            estado.
83      '''
84
85      u = S[:, t] - S[:, t - 1] if t > 0 else np.zeros(n)
86
87      '''
88      ---Predição---
89      x_pred representa a estimativa de estado, usando a matriz de transiç
            ão (F), estado atual (X) e a entrada de controle (u). p_pred é a
            predição da covariância do estado, considerando o ruído do
            processo (Q).
90      '''
91
92      x_pred = F @ X + B @ u
93      p_pred = F @ P @ F.T + Q
94
95      '''
96      ---Atualização---
97      a) residual é a diferença entre as medições (M) e a predição da
            observação (H @ x_pred).
98      b) residual_normalized normaliza o residual pela medição, fornecendo
             uma comparação percentual.
99      c) residual_covariance é a covariância do residual, considerando a
            predição da covariância do estado (p_pred) e o ruído da medição (
            R).
100     d) K é o ganho de Kalman, que otimiza a combinação das estimativas e
             medições.
101     e) X é Estado
102     f) P é a Matriz de Covariância
103     '''
104
105     residual = M[:, t] - H @ x_pred
106     residual_normalized = np.abs(residual) / M[:, t]
107     residual_covariance = H @ p_pred @ H.T + R
108     K = p_pred @ H.T @ np.linalg.inv(residual_covariance)
109     # Atualizando o estado (X) e a matriz de covariância (P) do sistema
110     X = x_pred + K @ residual
111     P = (np.eye(n) - K @ H) @ p_pred
112
```

```
113    # Armazenando as estimativas do estado para cada instante de tempo
114    estimates[:, t] = X
115
116    # Armazenando os resíduos normalizados para cada instante de tempo
117    residuals[:, t] = residual_normalized
118
119 # Transformando os resíduos em uma matriz
120 residuals_matrix = np.array(residuals)
```

A partir destas listas, os dados foram inseridos no loop iterativo do *Kalman Filter* retornando listas correspondentes para os valores residuais e inserindo no arquivo "residual.xlsx" estes valores de forma tabelada.

```
1  # Criando um DataFrame com os resíduos
2  data = {
3      f'Hora {i}': residuals[:, i] for i in range(24)
4  }
5  df = pd.DataFrame(data)
6
7  # Renomeando as linhas para representar os pontos de monitoramento
8  df.index = [f'r{i + 1}' for i in range(8)]
9
10 # Salvando o DataFrame em um arquivo Excel
11 df.to_excel('residual.xlsx', index=True, engine='openpyxl')
```

6 Resultados

Para permitir uma análise geoespecializada, foi selecionado o software Qgis, um *software* livre de código aberto que possui uma quantidade muito boa de complementos, além de permitir uma integração bastante fluida com códigos em python.

Para realizar essa análise, a tabela "residual.xlsx" foi importada no programa, além das coordenadas dos pontos de medição. Além disso, foi realizado a aplicação da ferramenta de geoprocessamento "polígonos de Voronoi" para criar uma dimensão da área de influência de cada ponto de monitoramento conforme se verifica na Figura 17.
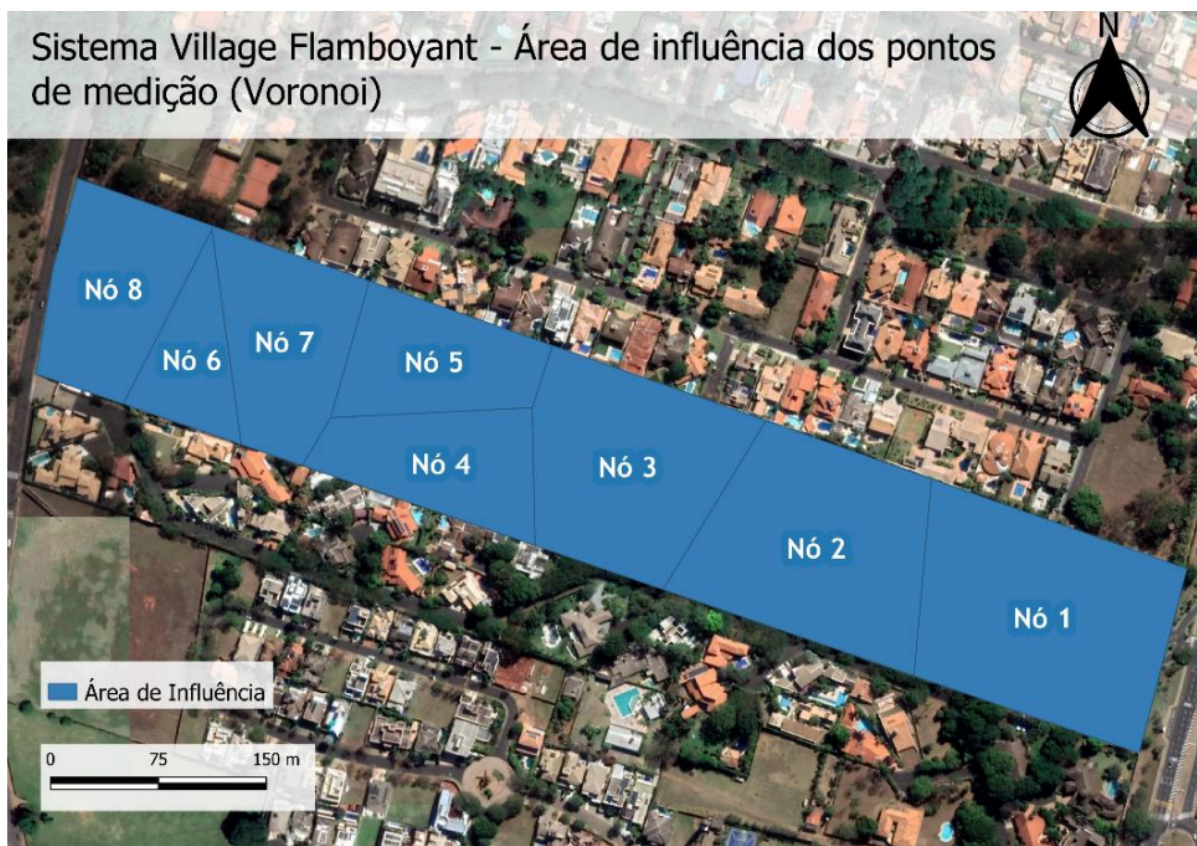
Figura 17 – Mapa temático "Polígonos de Voronoi"

Fonte: Autor, 2023

Os valores residuais obtidos pela execução do algoritmo do *Kalman Filter* foram atribuídos para cada um dos polígonos por meio de correlações entre a tabela importada e a camada do nó correspondente.

6.0.1   Segmentação de dados e definição de limiares para análise

Para possibilitar a detecção de anomalias através do QGis, é essencial segmentar os dados residuais resultantes em categorias que facilitem a interpretação e identificação visual de possíveis vazamentos. Neste sentido, os dados foram segmentados em cinco

classes distintas, cada uma representando um intervalo de valores definido com base em desvios padrões a partir da média dos resíduos:

significativas.

- Valores Normais: Abrange os dados até $\mu + 1\sigma$. Esta classe engloba os valores mais comuns e serve como referência para a identificação de variações.

- Variações comuns: Compreende o intervalo de $\mu+1\sigma$ até $\mu+1.5\sigma$, indicando variações que não possuem impacto importante na análise.

- Valores incomuns: Esta classe se estende de $\mu+1.5\sigma$ até $\mu+2\sigma$ e indicaria a incidência de valores indicativos de variações perceptíveis na dinâmica do sistema, mas sujeitos à uma baixa distinção com eventos não-anômalos, tais como uma demanda pontual para enchimento de uma piscina, abastecimento de um carro-pipa, entre outros.

- Possivelmente Anômalos: É a zona de alerta intermediária que vai de $\mu + 2\sigma$ até $\mu + 2.8\sigma$ que indica a necessidade de atenção sobre a condição do sistema.

- Anômalos Confirmados: Representa os dados acima de $\mu + 2.8\sigma$, sendo os valores que indicam com maior assertividade a incidência de um vazamento no sistema.

A segmentação foi definida com base em propriedades estatísticas de uma distribuição gaussiana e ajustada para refletir as características específicas dos dados em análise. A escolha desses limiares busca permitir uma distinção clara entre variações normais e potenciais anomalias, facilitando a tomada de decisões e intervenções no sistema de distribuição de água.

Figura 18 – Escala de cores para os polígonos - Exemplo da Camada das 9 horas

Fonte: Autor, 2023

Durante as 24 horas de análise, com exceção das 15 horas em que houve a abertura do terminal de descarga para simulação do vazamento, os dados residuais estiveram em patamares bastante estáveis, sendo possível diferenciar de forma bastante distinta os cenários com e sem vazamentos.

De modo geral, foi possível perceber a variação pelas classes construídas e apresentadas na Figura 18. Os valores residuais para o cenário estabelecido neste trabalho não ultrapassam 0,20 com o sistema em operação sem perturbações, como no exemplo do cenário às 09 horas (Figura 19) que se mantém em todos os cenários restantes, havendo apenas um aparente *outlier* no cenário das 14 horas, em que foi registrado um valor de 0,22 isolado e sem nenhuma correlação direta com algum evento controlado por este experimento, sendo mais provável, a existência de algum ruído momentâneo no sinal do sensor deste nó ou um aumento localizado e abrupto de demanda na ligação onde o sensor estava instalado. A hipótese de uma anormalidade no sistema como um todo foi descartada uma vez que não se verificou qualquer alteração importante nos polígonos adjacentes, demonstrando que, qualquer que fosse a causa desse *outlier*, não se tratava de uma condição sistêmica. Esta perspectiva pode ser percebida na Figura 20.
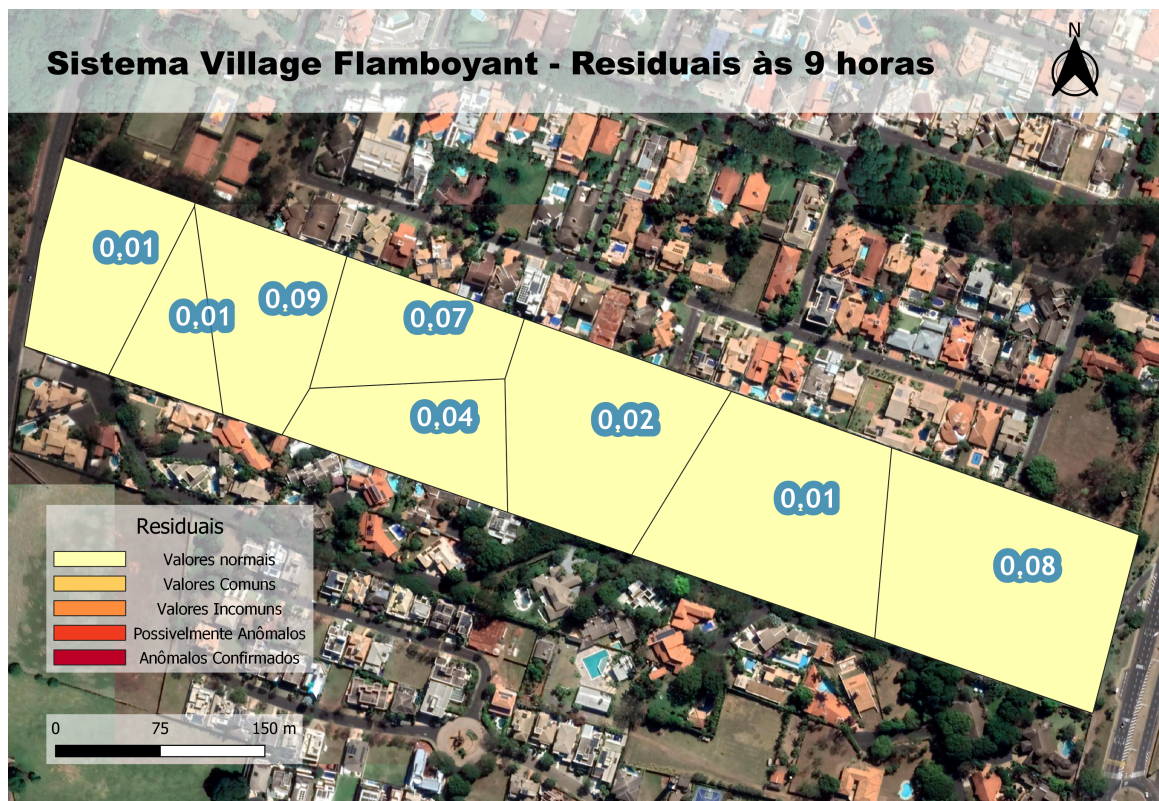
Figura 19 – Cenário às 09 horas

Fonte: Autor, 2023
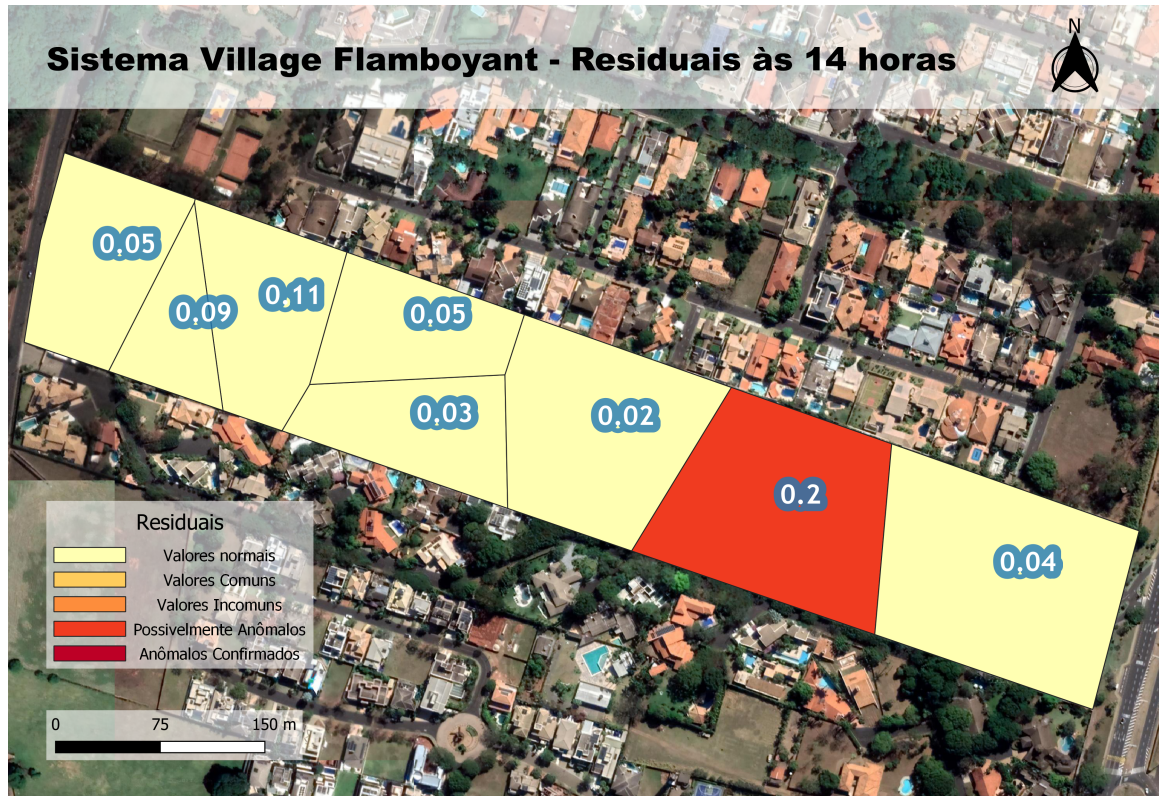
Figura 20 – Cenário às 14 horas e *outlier* no nó 2

Fonte: Autor, 2023

O resultado da análise da simulação do cenário com vazamento se deu às 15 horas (Figura 21) com a abertura do registro do terminal de sangria e permitiu uma verificação bastante clara do impacto desta perturbação na condição normal de abastecimento simulada pelo EPANET.

Além disso, foi possível perceber a atuação do *Kalman Filter* no horário subsequente à simulação do vazamento (figura 22), realizando as correções do ganho de Kalman (k) e reduzindo os residuais à patamares menores de 0,10 mesmo após a perturbação.
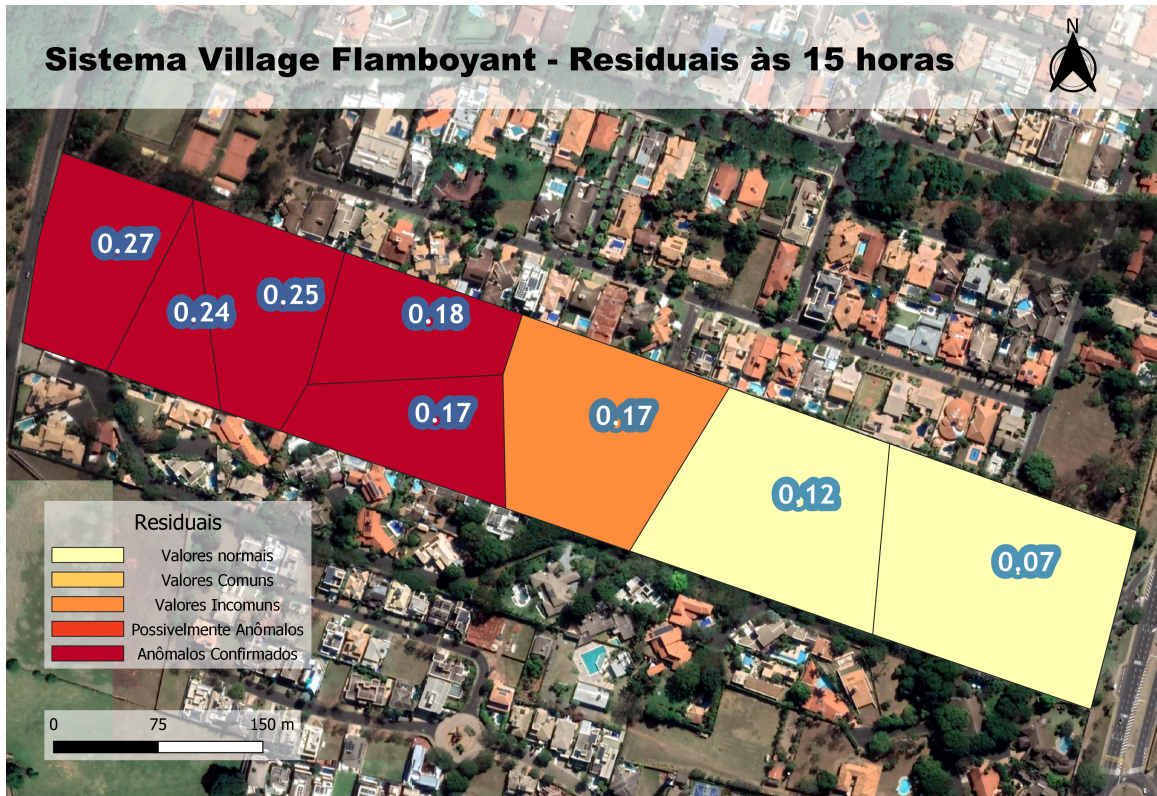
Figura 21 – Cenário das 15 horas com vazamento simulado

Fonte: Autor, 2023
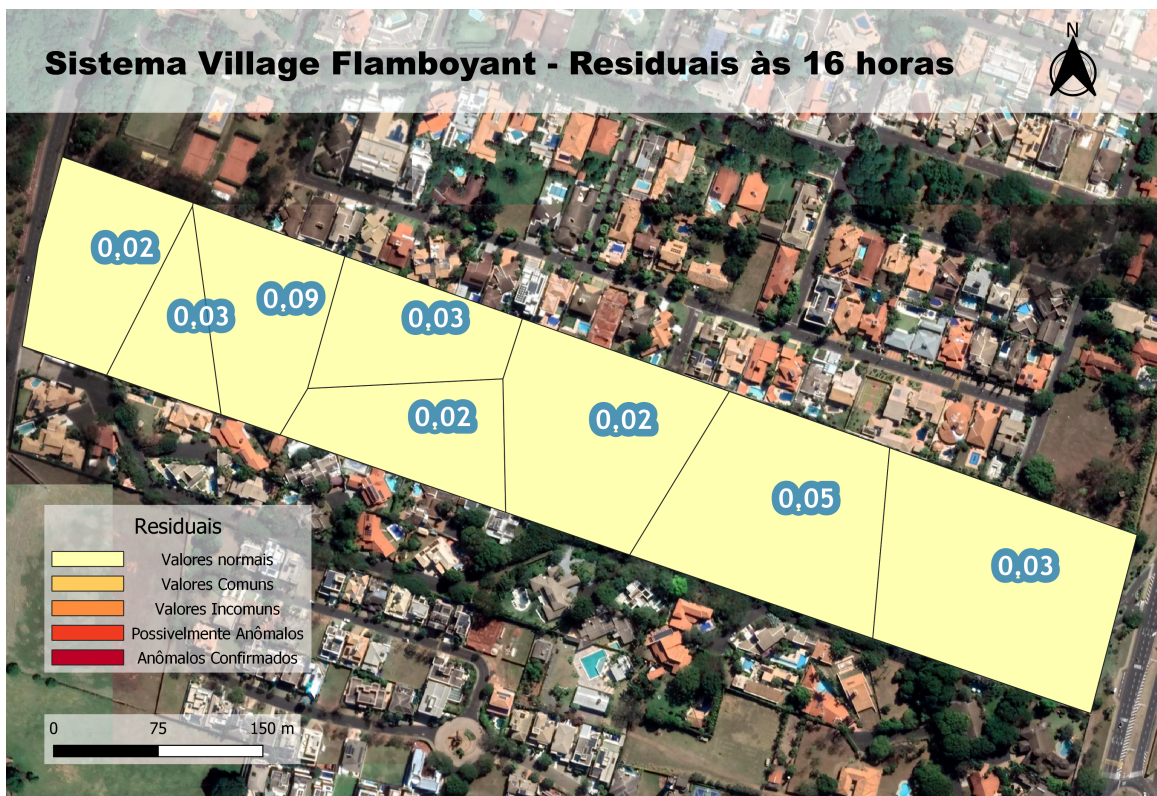
Figura 22 – Cenário às 16 horas

Fonte: Autor, 2023

Outro ponto importante à se destacar é a delimitação correta da área com maior probabilidade de conter o vazamento, tal condição pode permitir uma atuação rápida na intervenção dos setores operacionais e de manutenção, reduzindo tanto os valores gastos por vazamento localizado, quanto o volume de água perdido até que se realize a sua correção.

7 Conslusão

De forma geral, esta perspectiva abre um horizonte para que se reduza os custos do programa de combate e controle de perdas uma vez que "virtualiza" o conceito de Distrito de Medição e Controle (DMC), criando áreas de varredura menores.

Contudo, é preciso destacar alguns detalhes que precisariam ser resolvidos do ponto de vista técnico dos equipamentos necessários para a implementação de uma solução como a abordada neste trabalho, tais como a possibilidade de geração de energia no local de instalação dos *dataloggers* que, caso contrário, terão seu funcionamento limitado pela capacidade da bateria empregada e a existência de uma infraestrutura de comunicação que transmita os dados para uma Central de Controle, por exemplo.

Outros possíveis obstáculos podem estar relacionados com a existência de um cadastro confiável, sistemas setorizados que não possuam interligações não medidas, além de altos índices de Perdas Aparentes (fraudes e ligações clandestinas) que acarretarão em uma atribuição incorreta das demandas nos nós e, por conseguinte, valores residuais inconstantes e sobrepostos aos valores de um possível vazamento.

Por fim, é preciso salientar que o *Kalman Filter* se mostrou uma ferramenta muito confiável para detectar perturbações em um sistema com operação normal, contudo, sua característica principal é criar estimativas ponderadas entre os valores medidos e simulados, portanto, vazamentos inerentes, que não gerem uma perturbação perceptível ou vazamentos pré-existentes à aplicação do método, podem ser incorporados pelo modelo sem gerar uma percepção clara do problema, sendo aconselhável que o sistema onde o método for aplicado passe por um trabalho de redução de perdas prévio, com a utilização de métodos mais tradicionais, como o balanço hídrico e as vazões mínimas noturnas e, posteriormente, o método descrito neste trabalho, poderá então ser utilizado como forma de monitoramento da condição das perdas reais do sistema.

Referências

AESBE. *Guia prático para quantificaçãode balanços hídricos e indicadores de desempenho operacional.* [S.l.]: Associação Brasileira das Empresas Estaduais de Saneamento, 2015. Citado 2 vezes nas páginas 21 e 22.

AL-WASHALI, T.; SHARMA, S.; KENNEDY, M. Methods of assesment of water losses in water supply systems: a review. *Water Resources Management*, 2016. Citado 3 vezes nas páginas 12, 19 e 20.

BRAGALLI, C.; FORTINI, M.; TODINI, E. Enhancing knowledge in water distribution networks via data assimilation. *Water Resource Management*, 2016. Citado na página 26.

DELGADO-AGUIÑAGA, J.; BESANÇON, G.; BEGOVICH, O. Leak isolation based on extended kalman filter in a plastic pipeline under temperature variations with real-data validation. *23rd Mediterranean Conference on Control and Automation (MED)*, 2015. Citado 2 vezes nas páginas 12 e 13.

FERREIRA, G. Análise de desempenho do ensemble kalman filter com matriz de estados aumentada para localização de vazamentos em rede de distribuição de água. *Universidade de São Paulo*, 2020. Citado na página 26.

GONÇALVES, E.; ALVIM, P. Pesquisa e combate a vazamentos não visíveis. *Ministério das Cidades - Governo Federal do Brasil. Brasília*, 2007. Citado na página 19.

GÜNGÖR, M.; YARAR, U.; FIRAT, M. Reduction of water losses by rehabilitation of water distribution network. *Environmental Monitoring and Assessment*, 2017. Citado na página 14.

Instituto Trata Brasil. Ranking do saneamento do instituto trata brasil de 2023 (snis 2021). 2023. Citado na página 14.

KIM, Y.; BANG, H. Introduction to kalman filter and its applications. *Introduction and Implementations of the Kalman Filter*, 2019. Citado na página 26.

KINGDOM, B.; LIEMBERGER, R.; MARIN, P. The challenge of reducing non-revenue water (nwr) in developing countries - how the private sector can help: A look at performance-based service contracting. *Water supply and sanitation sector board discussion*, 2006. Citado 2 vezes nas páginas 12 e 14.

LAMBERT, A. et al. A review of performance indicators for real losses from water supply systems. *International Water Association (IWA)*, 1999. Citado na página 22.

LAMBERT, A.; HIRNER, A. Losses from water supply systems: Standard terminology and recommended performance measures. *International Water Association (IWA)*, 2000. Citado na página 17.

ROSSMAN, L. *EPANET 2 USER'S MANUAL.* Cincinnati, OH: EPA/600/R-00/057, 2000. Citado na página 32.

RUZZA, V. Data assimilation techniques for leakage detection in water distribution systems. *University of Padova*, 2017. Citado 3 vezes nas páginas 24, 26 e 27.

UNESCO; UN-WATER. Water and climate change. *United Nations*, 2020. Citado na página 12.

VALIBEYGI, A.; BALAGHI, M.; VIJAYARAGHAVAN, K. A comparative study of extended kalman filter and an optimal nonlinear observer for state estimation. *Control Engineering Practice*, 2017. Citado na página 26.

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 00:00:01 - 18.39	2023-03-13 00:34:01 - 18.47	2023-03-13 01:08:01 - 18.18
2023-03-13 00:01:01 - 18.43	2023-03-13 00:35:01 - 18.43	2023-03-13 01:09:01 - 17.97
2023-03-13 00:02:01 - 18.48	2023-03-13 00:36:01 - 18.43	2023-03-13 01:10:01 - 18.12
2023-03-13 00:03:01 - 18.42	2023-03-13 00:37:01 - 18.44	2023-03-13 01:11:01 - 18.19
2023-03-13 00:04:01 - 18.34	2023-03-13 00:38:01 - 18.48	2023-03-13 01:12:01 - 18.09
2023-03-13 00:05:01 - 18.4	2023-03-13 00:39:01 - 18.43	2023-03-13 01:13:01 - 18.13
2023-03-13 00:06:01 - 18.39	2023-03-13 00:40:01 - 18.33	2023-03-13 01:14:01 - 18.16
2023-03-13 00:07:01 - 18.4	2023-03-13 00:41:01 - 18.42	2023-03-13 01:15:01 - 18.1
2023-03-13 00:08:01 - 18.41	2023-03-13 00:42:01 - 18.44	2023-03-13 01:16:01 - 18.16
2023-03-13 00:09:01 - 18.46	2023-03-13 00:43:01 - 18.48	2023-03-13 01:17:01 - 18.19
2023-03-13 00:10:01 - 18.6	2023-03-13 00:44:01 - 18.35	2023-03-13 01:18:01 - 18.09
2023-03-13 00:11:01 - 18.41	2023-03-13 00:45:01 - 18.48	2023-03-13 01:19:01 - 18.14
2023-03-13 00:12:01 - 18.45	2023-03-13 00:46:01 - 18.45	2023-03-13 01:20:01 - 18.13
2023-03-13 00:13:01 - 18.48	2023-03-13 00:47:01 - 18.45	2023-03-13 01:21:01 - 18.12
2023-03-13 00:14:01 - 18.47	2023-03-13 00:48:01 - 18.47	2023-03-13 01:22:01 - 18.08
2023-03-13 00:15:01 - 18.42	2023-03-13 00:49:01 - 18.45	2023-03-13 01:23:01 - 18.19
2023-03-13 00:16:01 - 18.32	2023-03-13 00:50:01 - 18.4	2023-03-13 01:24:01 - 18.13
2023-03-13 00:17:01 - 18.44	2023-03-13 00:51:01 - 18.39	2023-03-13 01:25:01 - 18.21
2023-03-13 00:18:01 - 18.49	2023-03-13 00:52:01 - 18.47	2023-03-13 01:26:01 - 18.2
2023-03-13 00:19:01 - 18.47	2023-03-13 00:53:01 - 18.44	2023-03-13 01:27:01 - 18.04
2023-03-13 00:20:01 - 18.44	2023-03-13 00:54:01 - 18.44	2023-03-13 01:28:01 - 18.22
2023-03-13 00:21:01 - 18.46	2023-03-13 00:55:01 - 18.52	2023-03-13 01:29:01 - 17.96
2023-03-13 00:22:01 - 18.37	2023-03-13 00:56:01 - 18.32	2023-03-13 01:30:01 - 18.18
2023-03-13 00:23:01 - 18.42	2023-03-13 00:57:01 - 18.57	2023-03-13 01:31:01 - 18.29
2023-03-13 00:24:01 - 18.43	2023-03-13 00:58:01 - 18.54	2023-03-13 01:32:01 - 18.15
2023-03-13 00:25:01 - 18.43	2023-03-13 00:59:01 - 18.76	2023-03-13 01:33:01 - 18.18
2023-03-13 00:26:01 - 18.43	2023-03-13 01:00:01 - 18.23	2023-03-13 01:34:01 - 18.21
2023-03-13 00:27:01 - 18.41	2023-03-13 01:01:01 - 18.29	2023-03-13 01:35:01 - 18.23
2023-03-13 00:28:01 - 18.44	2023-03-13 01:02:01 - 18.09	2023-03-13 01:36:01 - 18.1
2023-03-13 00:29:01 - 18.42	2023-03-13 01:03:01 - 18.24	2023-03-13 01:37:01 - 18.15
2023-03-13 00:30:01 - 18.4	2023-03-13 01:04:01 - 18.19	2023-03-13 01:38:01 - 18.09
2023-03-13 00:31:01 - 18.51	2023-03-13 01:05:01 - 18.21	2023-03-13 01:39:01 - 18.14
2023-03-13 00:32:01 - 18.4	2023-03-13 01:06:01 - 18.28	2023-03-13 01:40:01 - 18.19
2023-03-13 00:33:01 - 18.36	2023-03-13 01:07:01 - 18.15	2023-03-13 01:41:01 - 18.18

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 01:42:01 - 18.14	2023-03-13 02:16:01 - 18.03	2023-03-13 02:50:01 - 18.08
2023-03-13 01:43:01 - 18.24	2023-03-13 02:17:01 - 18.06	2023-03-13 02:51:01 - 18.05
2023-03-13 01:44:01 - 18.16	2023-03-13 02:18:01 - 18.09	2023-03-13 02:52:01 - 18.08
2023-03-13 01:45:01 - 18.16	2023-03-13 02:19:01 - 18.06	2023-03-13 02:53:01 - 18.09
2023-03-13 01:46:01 - 18.17	2023-03-13 02:20:01 - 18.05	2023-03-13 02:54:01 - 18.1
2023-03-13 01:47:01 - 18.17	2023-03-13 02:21:01 - 18.08	2023-03-13 02:55:01 - 18.07
2023-03-13 01:48:01 - 18.19	2023-03-13 02:22:01 - 18.02	2023-03-13 02:56:01 - 18.02
2023-03-13 01:49:01 - 18.15	2023-03-13 02:23:01 - 18.07	2023-03-13 02:57:01 - 18.05
2023-03-13 01:50:01 - 18.15	2023-03-13 02:24:01 - 18.08	2023-03-13 02:58:01 - 18.11
2023-03-13 01:51:01 - 18.02	2023-03-13 02:25:01 - 18.1	2023-03-13 02:59:01 - 18.36
2023-03-13 01:52:01 - 18.12	2023-03-13 02:26:01 - 18.06	2023-03-13 03:00:01 - 17.97
2023-03-13 01:53:01 - 18.19	2023-03-13 02:27:01 - 18.13	2023-03-13 03:01:01 - 17.91
2023-03-13 01:54:01 - 18.19	2023-03-13 02:28:01 - 18.08	2023-03-13 03:02:01 - 17.9
2023-03-13 01:55:01 - 17.98	2023-03-13 02:29:01 - 18.06	2023-03-13 03:03:01 - 17.9
2023-03-13 01:56:01 - 18.2	2023-03-13 02:30:01 - 18.08	2023-03-13 03:04:01 - 17.95
2023-03-13 01:57:01 - 18.14	2023-03-13 02:31:01 - 18.11	2023-03-13 03:05:01 - 17.93
2023-03-13 01:58:01 - 18.17	2023-03-13 02:32:01 - 18.1	2023-03-13 03:06:01 - 17.92
2023-03-13 01:59:01 - 19.07	2023-03-13 02:33:01 - 17.86	2023-03-13 03:07:01 - 17.92
2023-03-13 02:00:01 - 18.1	2023-03-13 02:34:01 - 17.99	2023-03-13 03:08:01 - 17.95
2023-03-13 02:01:01 - 18.07	2023-03-13 02:35:01 - 18.08	2023-03-13 03:09:01 - 17.93
2023-03-13 02:02:01 - 18.06	2023-03-13 02:36:01 - 18.07	2023-03-13 03:10:01 - 17.92
2023-03-13 02:03:01 - 18.05	2023-03-13 02:37:01 - 18.04	2023-03-13 03:11:01 - 17.93
2023-03-13 02:04:01 - 18.03	2023-03-13 02:38:01 - 18.07	2023-03-13 03:12:01 - 17.91
2023-03-13 02:05:01 - 18.16	2023-03-13 02:39:01 - 18.01	2023-03-13 03:13:01 - 17.99
2023-03-13 02:06:01 - 18.11	2023-03-13 02:40:01 - 18.05	2023-03-13 03:14:01 - 17.93
2023-03-13 02:07:01 - 18.14	2023-03-13 02:41:01 - 18.08	2023-03-13 03:15:01 - 17.92
2023-03-13 02:08:01 - 18.08	2023-03-13 02:42:01 - 18.09	2023-03-13 03:16:01 - 17.91
2023-03-13 02:09:01 - 18.11	2023-03-13 02:43:01 - 18.02	2023-03-13 03:17:01 - 17.97
2023-03-13 02:10:01 - 18.09	2023-03-13 02:44:01 - 18.02	2023-03-13 03:18:01 - 17.82
2023-03-13 02:11:01 - 18.01	2023-03-13 02:45:01 - 18.07	2023-03-13 03:19:01 - 17.92
2023-03-13 02:12:01 - 18.12	2023-03-13 02:46:01 - 18.1	2023-03-13 03:20:01 - 17.89
2023-03-13 02:13:01 - 17.97	2023-03-13 02:47:01 - 18.04	2023-03-13 03:21:01 - 17.93
2023-03-13 02:14:01 - 18.09	2023-03-13 02:48:01 - 18.05	2023-03-13 03:22:01 - 18.03
2023-03-13 02:15:01 - 18.07	2023-03-13 02:49:01 - 18.04	2023-03-13 03:23:01 - 17.94

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 03:24:01 - 17.92	2023-03-13 03:58:01 - 17.87	2023-03-13 04:32:01 - 17.79
2023-03-13 03:25:01 - 17.92	2023-03-13 03:59:01 - 17.87	2023-03-13 04:33:01 - 17.78
2023-03-13 03:26:01 - 17.91	2023-03-13 04:00:01 - 17.8	2023-03-13 04:34:01 - 17.8
2023-03-13 03:27:01 - 18.0	2023-03-13 04:01:01 - 17.97	2023-03-13 04:35:01 - 17.78
2023-03-13 03:28:01 - 17.81	2023-03-13 04:02:01 - 17.79	2023-03-13 04:36:01 - 17.76
2023-03-13 03:29:01 - 17.97	2023-03-13 04:03:01 - 17.87	2023-03-13 04:37:01 - 17.77
2023-03-13 03:30:01 - 17.97	2023-03-13 04:04:01 - 17.66	2023-03-13 04:38:01 - 17.8
2023-03-13 03:31:01 - 18.02	2023-03-13 04:05:01 - 17.79	2023-03-13 04:39:01 - 17.8
2023-03-13 03:32:01 - 17.91	2023-03-13 04:06:01 - 17.58	2023-03-13 04:40:01 - 17.82
2023-03-13 03:33:01 - 17.9	2023-03-13 04:07:01 - 17.7	2023-03-13 04:41:01 - 17.76
2023-03-13 03:34:01 - 17.91	2023-03-13 04:08:01 - 17.79	2023-03-13 04:42:01 - 17.7
2023-03-13 03:35:01 - 18.04	2023-03-13 04:09:01 - 17.72	2023-03-13 04:43:01 - 17.78
2023-03-13 03:36:01 - 17.88	2023-03-13 04:10:01 - 17.86	2023-03-13 04:44:01 - 17.73
2023-03-13 03:37:01 - 17.94	2023-03-13 04:11:01 - 17.76	2023-03-13 04:45:01 - 17.87
2023-03-13 03:38:01 - 17.93	2023-03-13 04:12:01 - 17.72	2023-03-13 04:46:01 - 17.74
2023-03-13 03:39:01 - 17.76	2023-03-13 04:13:01 - 17.79	2023-03-13 04:47:01 - 17.86
2023-03-13 03:40:01 - 17.89	2023-03-13 04:14:01 - 17.87	2023-03-13 04:48:01 - 17.76
2023-03-13 03:41:01 - 17.91	2023-03-13 04:15:01 - 17.83	2023-03-13 04:49:01 - 17.87
2023-03-13 03:42:01 - 17.85	2023-03-13 04:16:01 - 17.72	2023-03-13 04:50:01 - 17.75
2023-03-13 03:43:01 - 18.01	2023-03-13 04:17:01 - 17.82	2023-03-13 04:51:01 - 17.81
2023-03-13 03:44:01 - 17.89	2023-03-13 04:18:01 - 17.78	2023-03-13 04:52:01 - 17.8
2023-03-13 03:45:01 - 17.9	2023-03-13 04:19:01 - 17.82	2023-03-13 04:53:01 - 17.84
2023-03-13 03:46:01 - 17.82	2023-03-13 04:20:01 - 17.81	2023-03-13 04:54:01 - 17.77
2023-03-13 03:47:01 - 17.93	2023-03-13 04:21:01 - 17.78	2023-03-13 04:55:01 - 17.78
2023-03-13 03:48:01 - 17.99	2023-03-13 04:22:01 - 17.86	2023-03-13 04:56:01 - 17.78
2023-03-13 03:49:01 - 17.94	2023-03-13 04:23:01 - 17.8	2023-03-13 04:57:01 - 17.76
2023-03-13 03:50:01 - 17.92	2023-03-13 04:24:01 - 17.79	2023-03-13 04:58:01 - 17.76
2023-03-13 03:51:01 - 17.93	2023-03-13 04:25:01 - 17.76	2023-03-13 04:59:01 - 17.87
2023-03-13 03:52:01 - 17.94	2023-03-13 04:26:01 - 17.81	2023-03-13 05:00:01 - 17.44
2023-03-13 03:53:01 - 17.94	2023-03-13 04:27:01 - 17.89	2023-03-13 05:01:01 - 17.48
2023-03-13 03:54:01 - 17.92	2023-03-13 04:28:01 - 17.79	2023-03-13 05:02:01 - 17.23
2023-03-13 03:55:01 - 17.91	2023-03-13 04:29:01 - 17.8	2023-03-13 05:03:01 - 17.48
2023-03-13 03:56:01 - 17.81	2023-03-13 04:30:01 - 17.8	2023-03-13 05:04:01 - 17.34
2023-03-13 03:57:01 - 17.89	2023-03-13 04:31:01 - 17.74	2023-03-13 05:05:01 - 17.4

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 05:06:01 - 17.5	2023-03-13 05:40:01 - 17.39	2023-03-13 06:14:01 - 16.97
2023-03-13 05:07:01 - 17.4	2023-03-13 05:41:01 - 17.37	2023-03-13 06:15:01 - 16.92
2023-03-13 05:08:01 - 17.44	2023-03-13 05:42:01 - 17.44	2023-03-13 06:16:01 - 16.91
2023-03-13 05:09:01 - 17.46	2023-03-13 05:43:01 - 17.39	2023-03-13 06:17:01 - 16.94
2023-03-13 05:10:01 - 17.3	2023-03-13 05:44:01 - 17.4	2023-03-13 06:18:01 - 16.97
2023-03-13 05:11:01 - 17.4	2023-03-13 05:45:01 - 17.46	2023-03-13 06:19:01 - 16.93
2023-03-13 05:12:01 - 17.37	2023-03-13 05:46:01 - 17.4	2023-03-13 06:20:01 - 16.9
2023-03-13 05:13:01 - 17.44	2023-03-13 05:47:01 - 17.46	2023-03-13 06:21:01 - 17.04
2023-03-13 05:14:01 - 17.36	2023-03-13 05:48:01 - 17.39	2023-03-13 06:22:01 - 16.95
2023-03-13 05:15:01 - 17.36	2023-03-13 05:49:01 - 17.45	2023-03-13 06:23:01 - 16.99
2023-03-13 05:16:01 - 17.36	2023-03-13 05:50:01 - 17.4	2023-03-13 06:24:01 - 16.9
2023-03-13 05:17:01 - 17.38	2023-03-13 05:51:01 - 17.32	2023-03-13 06:25:01 - 16.9
2023-03-13 05:18:01 - 17.39	2023-03-13 05:52:01 - 17.33	2023-03-13 06:26:01 - 16.93
2023-03-13 05:19:01 - 17.32	2023-03-13 05:53:01 - 17.45	2023-03-13 06:27:01 - 16.92
2023-03-13 05:20:01 - 17.41	2023-03-13 05:54:01 - 17.46	2023-03-13 06:28:01 - 16.9
2023-03-13 05:21:01 - 17.37	2023-03-13 05:55:01 - 17.38	2023-03-13 06:29:01 - 16.92
2023-03-13 05:22:01 - 17.46	2023-03-13 05:56:01 - 17.45	2023-03-13 06:30:01 - 16.9
2023-03-13 05:23:01 - 17.41	2023-03-13 05:57:01 - 17.37	2023-03-13 06:31:01 - 16.93
2023-03-13 05:24:01 - 17.44	2023-03-13 05:58:01 - 17.44	2023-03-13 06:32:01 - 17.01
2023-03-13 05:25:01 - 17.26	2023-03-13 05:59:01 - 17.71	2023-03-13 06:33:01 - 16.81
2023-03-13 05:26:01 - 17.43	2023-03-13 06:00:01 - 16.89	2023-03-13 06:34:01 - 16.94
2023-03-13 05:27:01 - 17.32	2023-03-13 06:01:01 - 16.9	2023-03-13 06:35:01 - 16.92
2023-03-13 05:28:01 - 17.33	2023-03-13 06:02:01 - 16.9	2023-03-13 06:36:01 - 17.0
2023-03-13 05:29:01 - 17.38	2023-03-13 06:03:01 - 16.94	2023-03-13 06:37:01 - 16.93
2023-03-13 05:30:01 - 17.4	2023-03-13 06:04:01 - 16.87	2023-03-13 06:38:01 - 16.69
2023-03-13 05:31:01 - 17.49	2023-03-13 06:05:01 - 16.9	2023-03-13 06:39:01 - 16.92
2023-03-13 05:32:01 - 17.41	2023-03-13 06:06:01 - 16.93	2023-03-13 06:40:01 - 16.74
2023-03-13 05:33:01 - 17.35	2023-03-13 06:07:01 - 16.92	2023-03-13 06:41:01 - 16.94
2023-03-13 05:34:01 - 17.41	2023-03-13 06:08:01 - 17.0	2023-03-13 06:42:01 - 16.85
2023-03-13 05:35:01 - 17.45	2023-03-13 06:09:01 - 16.88	2023-03-13 06:43:01 - 16.99
2023-03-13 05:36:01 - 17.24	2023-03-13 06:10:01 - 16.96	2023-03-13 06:44:01 - 17.0
2023-03-13 05:37:01 - 17.37	2023-03-13 06:11:01 - 16.96	2023-03-13 06:45:01 - 16.96
2023-03-13 05:38:01 - 17.4	2023-03-13 06:12:01 - 16.93	2023-03-13 06:46:01 - 16.89
2023-03-13 05:39:01 - 17.38	2023-03-13 06:13:01 - 16.92	2023-03-13 06:47:01 - 16.89

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 06:48:01 - 16.92	2023-03-13 07:22:01 - 15.93	2023-03-13 07:56:01 - 15.95
2023-03-13 06:49:01 - 16.92	2023-03-13 07:23:01 - 15.91	2023-03-13 07:57:01 - 15.98
2023-03-13 06:50:01 - 16.98	2023-03-13 07:24:01 - 16.01	2023-03-13 07:58:01 - 15.88
2023-03-13 06:51:01 - 17.0	2023-03-13 07:25:01 - 15.93	2023-03-13 07:59:01 - 16.44
2023-03-13 06:52:01 - 17.0	2023-03-13 07:26:01 - 15.9	2023-03-13 08:00:01 - 15.42
2023-03-13 06:53:01 - 16.92	2023-03-13 07:27:01 - 15.94	2023-03-13 08:01:01 - 15.38
2023-03-13 06:54:01 - 17.0	2023-03-13 07:28:01 - 15.88	2023-03-13 08:02:01 - 15.38
2023-03-13 06:55:01 - 17.0	2023-03-13 07:29:01 - 15.94	2023-03-13 08:03:01 - 15.36
2023-03-13 06:56:01 - 16.91	2023-03-13 07:30:01 - 15.95	2023-03-13 08:04:01 - 15.38
2023-03-13 06:57:01 - 16.93	2023-03-13 07:31:01 - 15.8	2023-03-13 08:05:01 - 15.45
2023-03-13 06:58:01 - 16.9	2023-03-13 07:32:01 - 15.88	2023-03-13 08:06:01 - 15.37
2023-03-13 06:59:01 - 16.54	2023-03-13 07:33:01 - 15.92	2023-03-13 08:07:01 - 15.39
2023-03-13 07:00:01 - 15.9	2023-03-13 07:34:01 - 15.88	2023-03-13 08:08:01 - 15.47
2023-03-13 07:01:01 - 15.92	2023-03-13 07:35:01 - 15.93	2023-03-13 08:09:01 - 15.41
2023-03-13 07:02:01 - 15.82	2023-03-13 07:36:01 - 15.89	2023-03-13 08:10:01 - 15.33
2023-03-13 07:03:01 - 15.88	2023-03-13 07:37:01 - 15.88	2023-03-13 08:11:01 - 15.42
2023-03-13 07:04:01 - 15.91	2023-03-13 07:38:01 - 15.89	2023-03-13 08:12:01 - 15.27
2023-03-13 07:05:01 - 15.9	2023-03-13 07:39:01 - 15.94	2023-03-13 08:13:01 - 15.39
2023-03-13 07:06:01 - 15.91	2023-03-13 07:40:01 - 15.88	2023-03-13 08:14:01 - 15.4
2023-03-13 07:07:01 - 15.93	2023-03-13 07:41:01 - 15.89	2023-03-13 08:15:01 - 15.38
2023-03-13 07:08:01 - 15.86	2023-03-13 07:42:01 - 15.91	2023-03-13 08:16:01 - 15.47
2023-03-13 07:09:01 - 15.94	2023-03-13 07:43:01 - 15.74	2023-03-13 08:17:01 - 15.4
2023-03-13 07:10:01 - 15.87	2023-03-13 07:44:01 - 15.93	2023-03-13 08:18:01 - 15.51
2023-03-13 07:11:01 - 15.94	2023-03-13 07:45:01 - 15.95	2023-03-13 08:19:01 - 15.44
2023-03-13 07:12:01 - 15.82	2023-03-13 07:46:01 - 15.84	2023-03-13 08:20:01 - 15.42
2023-03-13 07:13:01 - 15.89	2023-03-13 07:47:01 - 15.84	2023-03-13 08:21:01 - 15.34
2023-03-13 07:14:01 - 15.96	2023-03-13 07:48:01 - 15.99	2023-03-13 08:22:01 - 15.36
2023-03-13 07:15:01 - 15.94	2023-03-13 07:49:01 - 15.79	2023-03-13 08:23:01 - 15.43
2023-03-13 07:16:01 - 15.96	2023-03-13 07:50:01 - 15.89	2023-03-13 08:24:01 - 15.44
2023-03-13 07:17:01 - 15.91	2023-03-13 07:51:01 - 15.85	2023-03-13 08:25:01 - 15.52
2023-03-13 07:18:01 - 15.91	2023-03-13 07:52:01 - 15.72	2023-03-13 08:26:01 - 15.38
2023-03-13 07:19:01 - 15.88	2023-03-13 07:53:01 - 16.1	2023-03-13 08:27:01 - 15.36
2023-03-13 07:20:01 - 15.89	2023-03-13 07:54:01 - 15.89	2023-03-13 08:28:01 - 15.31
2023-03-13 07:21:01 - 15.96	2023-03-13 07:55:01 - 15.85	2023-03-13 08:29:01 - 15.41

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 08:30:01 - 15.32	2023-03-13 09:04:01 - 15.69	2023-03-13 09:38:01 - 15.65
2023-03-13 08:31:01 - 15.36	2023-03-13 09:05:01 - 15.51	2023-03-13 09:39:01 - 15.63
2023-03-13 08:32:01 - 15.45	2023-03-13 09:06:01 - 15.75	2023-03-13 09:40:01 - 15.6
2023-03-13 08:33:01 - 15.37	2023-03-13 09:07:01 - 15.6	2023-03-13 09:41:01 - 15.59
2023-03-13 08:34:01 - 15.34	2023-03-13 09:08:01 - 15.69	2023-03-13 09:42:01 - 15.62
2023-03-13 08:35:01 - 15.47	2023-03-13 09:09:01 - 15.6	2023-03-13 09:43:01 - 15.59
2023-03-13 08:36:01 - 15.45	2023-03-13 09:10:01 - 15.56	2023-03-13 09:44:01 - 15.61
2023-03-13 08:37:01 - 15.42	2023-03-13 09:11:01 - 15.51	2023-03-13 09:45:01 - 15.55
2023-03-13 08:38:01 - 15.34	2023-03-13 09:12:01 - 15.66	2023-03-13 09:46:01 - 15.58
2023-03-13 08:39:01 - 15.41	2023-03-13 09:13:01 - 15.68	2023-03-13 09:47:01 - 15.66
2023-03-13 08:40:01 - 15.37	2023-03-13 09:14:01 - 15.59	2023-03-13 09:48:01 - 15.59
2023-03-13 08:41:01 - 15.39	2023-03-13 09:15:01 - 15.63	2023-03-13 09:49:01 - 15.74
2023-03-13 08:42:01 - 15.42	2023-03-13 09:16:01 - 15.58	2023-03-13 09:50:01 - 15.53
2023-03-13 08:43:01 - 15.41	2023-03-13 09:17:01 - 15.63	2023-03-13 09:51:01 - 15.49
2023-03-13 08:44:01 - 15.39	2023-03-13 09:18:01 - 15.57	2023-03-13 09:52:01 - 15.63
2023-03-13 08:45:01 - 15.39	2023-03-13 09:19:01 - 15.65	2023-03-13 09:53:01 - 15.64
2023-03-13 08:46:01 - 15.35	2023-03-13 09:20:01 - 15.62	2023-03-13 09:54:01 - 15.62
2023-03-13 08:47:01 - 15.49	2023-03-13 09:21:01 - 15.62	2023-03-13 09:55:01 - 15.7
2023-03-13 08:48:01 - 15.36	2023-03-13 09:22:01 - 15.62	2023-03-13 09:56:01 - 15.6
2023-03-13 08:49:01 - 15.51	2023-03-13 09:23:01 - 15.61	2023-03-13 09:57:01 - 15.66
2023-03-13 08:50:01 - 15.33	2023-03-13 09:24:01 - 15.66	2023-03-13 09:58:01 - 15.49
2023-03-13 08:51:01 - 15.32	2023-03-13 09:25:01 - 15.57	2023-03-13 09:59:01 - 15.63
2023-03-13 08:52:01 - 15.38	2023-03-13 09:26:01 - 15.61	2023-03-13 10:00:01 - 15.55
2023-03-13 08:53:01 - 15.43	2023-03-13 09:27:01 - 15.58	2023-03-13 10:01:01 - 15.49
2023-03-13 08:54:01 - 15.36	2023-03-13 09:28:01 - 15.58	2023-03-13 10:02:01 - 15.51
2023-03-13 08:55:01 - 15.56	2023-03-13 09:29:01 - 15.61	2023-03-13 10:03:01 - 15.45
2023-03-13 08:56:01 - 15.5	2023-03-13 09:30:01 - 15.5	2023-03-13 10:04:01 - 15.52
2023-03-13 08:57:01 - 15.41	2023-03-13 09:31:01 - 15.56	2023-03-13 10:05:01 - 15.59
2023-03-13 08:58:01 - 15.26	2023-03-13 09:32:01 - 15.66	2023-03-13 10:06:01 - 15.28
2023-03-13 08:59:01 - 15.42	2023-03-13 09:33:01 - 15.7	2023-03-13 10:07:01 - 15.36
2023-03-13 09:00:01 - 15.58	2023-03-13 09:34:01 - 15.58	2023-03-13 10:08:01 - 15.42
2023-03-13 09:01:01 - 15.62	2023-03-13 09:35:01 - 15.57	2023-03-13 10:09:01 - 15.45
2023-03-13 09:02:01 - 15.64	2023-03-13 09:36:01 - 15.52	2023-03-13 10:10:01 - 15.3
2023-03-13 09:03:01 - 15.65	2023-03-13 09:37:01 - 15.64	2023-03-13 10:11:01 - 15.62

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 10:12:01 - 15.53	2023-03-13 10:46:01 - 15.57	2023-03-13 11:20:01 - 15.12
2023-03-13 10:13:01 - 15.53	2023-03-13 10:47:01 - 15.53	2023-03-13 11:21:01 - 15.07
2023-03-13 10:14:01 - 15.49	2023-03-13 10:48:01 - 15.51	2023-03-13 11:22:01 - 15.08
2023-03-13 10:15:01 - 15.5	2023-03-13 10:49:01 - 15.54	2023-03-13 11:23:01 - 15.03
2023-03-13 10:16:01 - 15.54	2023-03-13 10:50:01 - 15.54	2023-03-13 11:24:01 - 14.96
2023-03-13 10:17:01 - 15.48	2023-03-13 10:51:01 - 15.5	2023-03-13 11:25:01 - 14.94
2023-03-13 10:18:01 - 15.46	2023-03-13 10:52:01 - 15.49	2023-03-13 11:26:01 - 15.11
2023-03-13 10:19:01 - 15.53	2023-03-13 10:53:01 - 15.54	2023-03-13 11:27:01 - 15.08
2023-03-13 10:20:01 - 15.55	2023-03-13 10:54:01 - 15.29	2023-03-13 11:28:01 - 15.09
2023-03-13 10:21:01 - 15.31	2023-03-13 10:55:01 - 15.5	2023-03-13 11:29:01 - 15.15
2023-03-13 10:22:01 - 15.48	2023-03-13 10:56:01 - 15.5	2023-03-13 11:30:01 - 15.14
2023-03-13 10:23:01 - 15.49	2023-03-13 10:57:01 - 15.49	2023-03-13 11:31:01 - 14.97
2023-03-13 10:24:01 - 15.5	2023-03-13 10:58:01 - 15.48	2023-03-13 11:32:01 - 15.07
2023-03-13 10:25:01 - 15.49	2023-03-13 10:59:01 - 15.58	2023-03-13 11:33:01 - 15.05
2023-03-13 10:26:01 - 15.47	2023-03-13 11:00:01 - 15.09	2023-03-13 11:34:01 - 15.05
2023-03-13 10:27:01 - 15.51	2023-03-13 11:01:01 - 15.12	2023-03-13 11:35:01 - 15.11
2023-03-13 10:28:01 - 15.52	2023-03-13 11:02:01 - 15.03	2023-03-13 11:36:01 - 15.08
2023-03-13 10:29:01 - 15.54	2023-03-13 11:03:01 - 15.12	2023-03-13 11:37:01 - 15.11
2023-03-13 10:30:01 - 15.4	2023-03-13 11:04:01 - 15.01	2023-03-13 11:38:01 - 15.1
2023-03-13 10:31:01 - 15.37	2023-03-13 11:05:01 - 15.11	2023-03-13 11:39:01 - 15.07
2023-03-13 10:32:01 - 15.55	2023-03-13 11:06:01 - 15.08	2023-03-13 11:40:01 - 15.07
2023-03-13 10:33:01 - 15.51	2023-03-13 11:07:01 - 15.02	2023-03-13 11:41:01 - 15.08
2023-03-13 10:34:01 - 15.47	2023-03-13 11:08:01 - 15.08	2023-03-13 11:42:01 - 15.07
2023-03-13 10:35:01 - 15.56	2023-03-13 11:09:01 - 15.14	2023-03-13 11:43:01 - 15.19
2023-03-13 10:36:01 - 15.51	2023-03-13 11:10:01 - 15.11	2023-03-13 11:44:01 - 14.94
2023-03-13 10:37:01 - 15.55	2023-03-13 11:11:01 - 15.07	2023-03-13 11:45:01 - 15.04
2023-03-13 10:38:01 - 15.54	2023-03-13 11:12:01 - 15.12	2023-03-13 11:46:01 - 15.13
2023-03-13 10:39:01 - 15.42	2023-03-13 11:13:01 - 15.09	2023-03-13 11:47:01 - 15.0
2023-03-13 10:40:01 - 15.52	2023-03-13 11:14:01 - 15.08	2023-03-13 11:48:01 - 15.13
2023-03-13 10:41:01 - 15.54	2023-03-13 11:15:01 - 15.02	2023-03-13 11:49:01 - 15.11
2023-03-13 10:42:01 - 15.52	2023-03-13 11:16:01 - 15.09	2023-03-13 11:50:01 - 15.1
2023-03-13 10:43:01 - 15.51	2023-03-13 11:17:01 - 15.1	2023-03-13 11:51:01 - 15.05
2023-03-13 10:44:01 - 15.54	2023-03-13 11:18:01 - 15.01	2023-03-13 11:52:01 - 15.0
2023-03-13 10:45:01 - 15.38	2023-03-13 11:19:01 - 15.1	2023-03-13 11:53:01 - 15.06

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 11:54:01 - 15.15	2023-03-13 12:28:01 - 16.23	2023-03-13 13:02:01 - 14.79
2023-03-13 11:55:01 - 15.09	2023-03-13 12:29:01 - 16.19	2023-03-13 13:03:01 - 14.71
2023-03-13 11:56:01 - 15.07	2023-03-13 12:30:01 - 16.26	2023-03-13 13:04:01 - 14.84
2023-03-13 11:57:01 - 14.92	2023-03-13 12:31:01 - 16.18	2023-03-13 13:05:01 - 14.76
2023-03-13 11:58:01 - 15.08	2023-03-13 12:32:01 - 16.16	2023-03-13 13:06:01 - 14.9
2023-03-13 11:59:01 - 16.16	2023-03-13 12:33:01 - 16.28	2023-03-13 13:07:01 - 14.72
2023-03-13 12:00:01 - 16.17	2023-03-13 12:34:01 - 16.19	2023-03-13 13:08:01 - 14.72
2023-03-13 12:01:01 - 16.18	2023-03-13 12:35:01 - 16.17	2023-03-13 13:09:01 - 14.69
2023-03-13 12:02:01 - 16.19	2023-03-13 12:36:01 - 16.19	2023-03-13 13:10:01 - 14.75
2023-03-13 12:03:01 - 16.25	2023-03-13 12:37:01 - 16.14	2023-03-13 13:11:01 - 14.75
2023-03-13 12:04:01 - 16.03	2023-03-13 12:38:01 - 16.18	2023-03-13 13:12:01 - 14.74
2023-03-13 12:05:01 - 16.21	2023-03-13 12:39:01 - 16.22	2023-03-13 13:13:01 - 14.74
2023-03-13 12:06:01 - 16.25	2023-03-13 12:40:01 - 16.26	2023-03-13 13:14:01 - 14.76
2023-03-13 12:07:01 - 16.16	2023-03-13 12:41:01 - 16.16	2023-03-13 13:15:01 - 14.79
2023-03-13 12:08:01 - 16.2	2023-03-13 12:42:01 - 16.19	2023-03-13 13:16:01 - 14.76
2023-03-13 12:09:01 - 16.2	2023-03-13 12:43:01 - 16.23	2023-03-13 13:17:01 - 14.76
2023-03-13 12:10:01 - 16.21	2023-03-13 12:44:01 - 16.22	2023-03-13 13:18:01 - 14.77
2023-03-13 12:11:01 - 16.26	2023-03-13 12:45:01 - 16.14	2023-03-13 13:19:01 - 14.84
2023-03-13 12:12:01 - 16.1	2023-03-13 12:46:01 - 16.26	2023-03-13 13:20:01 - 14.75
2023-03-13 12:13:01 - 16.21	2023-03-13 12:47:01 - 16.18	2023-03-13 13:21:01 - 14.7
2023-03-13 12:14:01 - 16.24	2023-03-13 12:48:01 - 16.16	2023-03-13 13:22:01 - 14.77
2023-03-13 12:15:01 - 16.18	2023-03-13 12:49:01 - 16.23	2023-03-13 13:23:01 - 14.73
2023-03-13 12:16:01 - 16.22	2023-03-13 12:50:01 - 16.11	2023-03-13 13:24:01 - 14.91
2023-03-13 12:17:01 - 16.2	2023-03-13 12:51:01 - 16.08	2023-03-13 13:25:01 - 14.83
2023-03-13 12:18:01 - 16.21	2023-03-13 12:52:01 - 16.18	2023-03-13 13:26:01 - 14.85
2023-03-13 12:19:01 - 16.29	2023-03-13 12:53:01 - 16.18	2023-03-13 13:27:01 - 14.82
2023-03-13 12:20:01 - 16.09	2023-03-13 12:54:01 - 16.29	2023-03-13 13:28:01 - 14.79
2023-03-13 12:21:01 - 16.24	2023-03-13 12:55:01 - 16.21	2023-03-13 13:29:01 - 14.76
2023-03-13 12:22:01 - 16.23	2023-03-13 12:56:01 - 16.33	2023-03-13 13:30:01 - 14.78
2023-03-13 12:23:01 - 16.24	2023-03-13 12:57:01 - 16.28	2023-03-13 13:31:01 - 14.83
2023-03-13 12:24:01 - 16.11	2023-03-13 12:58:01 - 16.21	2023-03-13 13:32:01 - 14.78
2023-03-13 12:25:01 - 16.22	2023-03-13 12:59:01 - 16.24	2023-03-13 13:33:01 - 14.76
2023-03-13 12:26:01 - 16.16	2023-03-13 13:00:01 - 14.88	2023-03-13 13:34:01 - 14.82
2023-03-13 12:27:01 - 16.22	2023-03-13 13:01:01 - 14.83	2023-03-13 13:35:01 - 14.79

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 13:36:01 - 14.76	2023-03-13 14:10:01 - 15.73	2023-03-13 14:44:01 - 15.71
2023-03-13 13:37:01 - 14.74	2023-03-13 14:11:01 - 15.77	2023-03-13 14:45:01 - 15.69
2023-03-13 13:38:01 - 14.82	2023-03-13 14:12:01 - 15.98	2023-03-13 14:46:01 - 15.9
2023-03-13 13:39:01 - 14.79	2023-03-13 14:13:01 - 15.71	2023-03-13 14:47:01 - 15.77
2023-03-13 13:40:01 - 14.79	2023-03-13 14:14:01 - 15.65	2023-03-13 14:48:01 - 15.7
2023-03-13 13:41:01 - 14.73	2023-03-13 14:15:01 - 15.7	2023-03-13 14:49:01 - 15.72
2023-03-13 13:42:01 - 14.79	2023-03-13 14:16:01 - 15.6	2023-03-13 14:50:01 - 15.72
2023-03-13 13:43:01 - 14.76	2023-03-13 14:17:01 - 15.71	2023-03-13 14:51:01 - 15.76
2023-03-13 13:44:01 - 14.8	2023-03-13 14:18:01 - 15.69	2023-03-13 14:52:01 - 15.72
2023-03-13 13:45:01 - 14.78	2023-03-13 14:19:01 - 15.74	2023-03-13 14:53:01 - 15.71
2023-03-13 13:46:01 - 14.78	2023-03-13 14:20:01 - 15.71	2023-03-13 14:54:01 - 15.67
2023-03-13 13:47:01 - 14.72	2023-03-13 14:21:01 - 15.62	2023-03-13 14:55:01 - 15.81
2023-03-13 13:48:01 - 14.78	2023-03-13 14:22:01 - 15.75	2023-03-13 14:56:01 - 15.72
2023-03-13 13:49:01 - 14.77	2023-03-13 14:23:01 - 15.81	2023-03-13 14:57:01 - 15.73
2023-03-13 13:50:01 - 14.87	2023-03-13 14:24:01 - 15.65	2023-03-13 14:58:01 - 15.77
2023-03-13 13:51:01 - 14.69	2023-03-13 14:25:01 - 15.69	2023-03-13 14:59:01 - 15.03
2023-03-13 13:52:01 - 14.76	2023-03-13 14:26:01 - 15.62	2023-03-13 15:00:01 - 15.1
2023-03-13 13:53:01 - 14.86	2023-03-13 14:27:01 - 15.68	2023-03-13 15:01:01 - 15.22
2023-03-13 13:54:01 - 14.76	2023-03-13 14:28:01 - 15.71	2023-03-13 15:02:01 - 15.21
2023-03-13 13:55:01 - 14.82	2023-03-13 14:29:01 - 15.74	2023-03-13 15:03:01 - 15.2
2023-03-13 13:56:01 - 14.79	2023-03-13 14:30:01 - 15.7	2023-03-13 15:04:01 - 15.23
2023-03-13 13:57:01 - 14.84	2023-03-13 14:31:01 - 15.69	2023-03-13 15:05:01 - 15.35
2023-03-13 13:58:01 - 14.8	2023-03-13 14:32:01 - 15.77	2023-03-13 15:06:01 - 15.21
2023-03-13 13:59:01 - 15.22	2023-03-13 14:33:01 - 15.81	2023-03-13 15:07:01 - 15.05
2023-03-13 14:00:01 - 15.77	2023-03-13 14:34:01 - 15.71	2023-03-13 15:08:01 - 15.16
2023-03-13 14:01:01 - 15.59	2023-03-13 14:35:01 - 15.75	2023-03-13 15:09:01 - 15.18
2023-03-13 14:02:01 - 15.54	2023-03-13 14:36:01 - 15.82	2023-03-13 15:10:01 - 15.16
2023-03-13 14:03:01 - 15.67	2023-03-13 14:37:01 - 15.75	2023-03-13 15:11:01 - 15.19
2023-03-13 14:04:01 - 15.71	2023-03-13 14:38:01 - 15.7	2023-03-13 15:12:01 - 15.22
2023-03-13 14:05:01 - 15.8	2023-03-13 14:39:01 - 15.81	2023-03-13 15:13:01 - 15.22
2023-03-13 14:06:01 - 15.67	2023-03-13 14:40:01 - 15.71	2023-03-13 15:14:01 - 15.2
2023-03-13 14:07:01 - 15.73	2023-03-13 14:41:01 - 15.73	2023-03-13 15:15:01 - 15.16
2023-03-13 14:08:01 - 15.8	2023-03-13 14:42:01 - 15.62	2023-03-13 15:16:01 - 15.16
2023-03-13 14:09:01 - 15.73	2023-03-13 14:43:01 - 15.68	2023-03-13 15:17:01 - 15.28

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 15:18:01 - 15.2	2023-03-13 15:52:01 - 15.21	2023-03-13 16:26:01 - 15.79
2023-03-13 15:19:01 - 15.25	2023-03-13 15:53:01 - 15.16	2023-03-13 16:27:01 - 15.86
2023-03-13 15:20:01 - 15.14	2023-03-13 15:54:01 - 15.23	2023-03-13 16:28:01 - 15.81
2023-03-13 15:21:01 - 15.19	2023-03-13 15:55:01 - 15.23	2023-03-13 16:29:01 - 15.93
2023-03-13 15:22:01 - 15.23	2023-03-13 15:56:01 - 15.11	2023-03-13 16:30:01 - 15.67
2023-03-13 15:23:01 - 15.28	2023-03-13 15:57:01 - 15.21	2023-03-13 16:31:01 - 15.77
2023-03-13 15:24:01 - 15.22	2023-03-13 15:58:01 - 15.15	2023-03-13 16:32:01 - 15.91
2023-03-13 15:25:01 - 15.21	2023-03-13 15:59:01 - 14.69	2023-03-13 16:33:01 - 15.89
2023-03-13 15:26:01 - 15.24	2023-03-13 16:00:01 - 15.81	2023-03-13 16:34:01 - 15.82
2023-03-13 15:27:01 - 15.09	2023-03-13 16:01:01 - 15.88	2023-03-13 16:35:01 - 15.83
2023-03-13 15:28:01 - 15.23	2023-03-13 16:02:01 - 15.74	2023-03-13 16:36:01 - 15.8
2023-03-13 15:29:01 - 15.2	2023-03-13 16:03:01 - 15.81	2023-03-13 16:37:01 - 15.79
2023-03-13 15:30:01 - 15.26	2023-03-13 16:04:01 - 15.77	2023-03-13 16:38:01 - 15.78
2023-03-13 15:31:01 - 15.15	2023-03-13 16:05:01 - 15.84	2023-03-13 16:39:01 - 15.81
2023-03-13 15:32:01 - 15.26	2023-03-13 16:06:01 - 15.74	2023-03-13 16:40:01 - 15.84
2023-03-13 15:33:01 - 15.23	2023-03-13 16:07:01 - 15.77	2023-03-13 16:41:01 - 15.82
2023-03-13 15:34:01 - 15.16	2023-03-13 16:08:01 - 15.69	2023-03-13 16:42:01 - 15.78
2023-03-13 15:35:01 - 15.2	2023-03-13 16:09:01 - 15.79	2023-03-13 16:43:01 - 15.61
2023-03-13 15:36:01 - 15.36	2023-03-13 16:10:01 - 15.78	2023-03-13 16:44:01 - 15.89
2023-03-13 15:37:01 - 15.27	2023-03-13 16:11:01 - 15.71	2023-03-13 16:45:01 - 15.8
2023-03-13 15:38:01 - 15.25	2023-03-13 16:12:01 - 15.77	2023-03-13 16:46:01 - 15.87
2023-03-13 15:39:01 - 15.25	2023-03-13 16:13:01 - 15.78	2023-03-13 16:47:01 - 15.86
2023-03-13 15:40:01 - 15.22	2023-03-13 16:14:01 - 15.79	2023-03-13 16:48:01 - 15.83
2023-03-13 15:41:01 - 15.29	2023-03-13 16:15:01 - 15.68	2023-03-13 16:49:01 - 15.84
2023-03-13 15:42:01 - 15.23	2023-03-13 16:16:01 - 15.86	2023-03-13 16:50:01 - 15.78
2023-03-13 15:43:01 - 15.2	2023-03-13 16:17:01 - 15.82	2023-03-13 16:51:01 - 15.76
2023-03-13 15:44:01 - 15.24	2023-03-13 16:18:01 - 15.68	2023-03-13 16:52:01 - 15.85
2023-03-13 15:45:01 - 15.19	2023-03-13 16:19:01 - 15.8	2023-03-13 16:53:01 - 15.79
2023-03-13 15:46:01 - 15.18	2023-03-13 16:20:01 - 15.81	2023-03-13 16:54:01 - 15.83
2023-03-13 15:47:01 - 15.27	2023-03-13 16:21:01 - 15.79	2023-03-13 16:55:01 - 15.81
2023-03-13 15:48:01 - 15.2	2023-03-13 16:22:01 - 15.81	2023-03-13 16:56:01 - 15.78
2023-03-13 15:49:01 - 15.17	2023-03-13 16:23:01 - 15.67	2023-03-13 16:57:01 - 15.83
2023-03-13 15:50:01 - 15.24	2023-03-13 16:24:01 - 15.82	2023-03-13 16:58:01 - 15.7
2023-03-13 15:51:01 - 15.21	2023-03-13 16:25:01 - 15.82	2023-03-13 16:59:01 - 16.0

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 17:00:01 - 17.76	2023-03-13 17:34:01 - 17.93	2023-03-13 18:08:01 - 17.3
2023-03-13 17:01:01 - 17.84	2023-03-13 17:35:01 - 17.96	2023-03-13 18:09:01 - 17.32
2023-03-13 17:02:01 - 17.93	2023-03-13 17:36:01 - 18.0	2023-03-13 18:10:01 - 17.38
2023-03-13 17:03:01 - 18.02	2023-03-13 17:37:01 - 17.89	2023-03-13 18:11:01 - 17.34
2023-03-13 17:04:01 - 17.99	2023-03-13 17:38:01 - 17.86	2023-03-13 18:12:01 - 17.34
2023-03-13 17:05:01 - 17.95	2023-03-13 17:39:01 - 17.87	2023-03-13 18:13:01 - 17.27
2023-03-13 17:06:01 - 18.01	2023-03-13 17:40:01 - 17.87	2023-03-13 18:14:01 - 17.38
2023-03-13 17:07:01 - 17.94	2023-03-13 17:41:01 - 17.93	2023-03-13 18:15:01 - 17.31
2023-03-13 17:08:01 - 17.96	2023-03-13 17:42:01 - 17.94	2023-03-13 18:16:01 - 17.32
2023-03-13 17:09:01 - 17.86	2023-03-13 17:43:01 - 17.95	2023-03-13 18:17:01 - 17.3
2023-03-13 17:10:01 - 17.83	2023-03-13 17:44:01 - 17.9	2023-03-13 18:18:01 - 17.36
2023-03-13 17:11:01 - 18.01	2023-03-13 17:45:01 - 17.95	2023-03-13 18:19:01 - 17.35
2023-03-13 17:12:01 - 17.95	2023-03-13 17:46:01 - 17.92	2023-03-13 18:20:01 - 17.31
2023-03-13 17:13:01 - 18.01	2023-03-13 17:47:01 - 17.94	2023-03-13 18:21:01 - 17.29
2023-03-13 17:14:01 - 17.96	2023-03-13 17:48:01 - 17.92	2023-03-13 18:22:01 - 17.34
2023-03-13 17:15:01 - 17.96	2023-03-13 17:49:01 - 17.87	2023-03-13 18:23:01 - 17.42
2023-03-13 17:16:01 - 17.86	2023-03-13 17:50:01 - 18.0	2023-03-13 18:24:01 - 17.38
2023-03-13 17:17:01 - 17.9	2023-03-13 17:51:01 - 17.98	2023-03-13 18:25:01 - 17.37
2023-03-13 17:18:01 - 17.96	2023-03-13 17:52:01 - 17.96	2023-03-13 18:26:01 - 17.37
2023-03-13 17:19:01 - 17.85	2023-03-13 17:53:01 - 17.97	2023-03-13 18:27:01 - 17.44
2023-03-13 17:20:01 - 18.01	2023-03-13 17:54:01 - 18.1	2023-03-13 18:28:01 - 17.29
2023-03-13 17:21:01 - 18.01	2023-03-13 17:55:01 - 17.98	2023-03-13 18:29:01 - 17.27
2023-03-13 17:22:01 - 17.96	2023-03-13 17:56:01 - 17.93	2023-03-13 18:30:01 - 17.32
2023-03-13 17:23:01 - 17.91	2023-03-13 17:57:01 - 17.95	2023-03-13 18:31:01 - 17.23
2023-03-13 17:24:01 - 17.96	2023-03-13 17:58:01 - 17.96	2023-03-13 18:32:01 - 17.37
2023-03-13 17:25:01 - 17.98	2023-03-13 17:59:01 - 18.08	2023-03-13 18:33:01 - 17.44
2023-03-13 17:26:01 - 17.93	2023-03-13 18:00:01 - 17.29	2023-03-13 18:34:01 - 17.22
2023-03-13 17:27:01 - 17.93	2023-03-13 18:01:01 - 17.32	2023-03-13 18:35:01 - 17.35
2023-03-13 17:28:01 - 17.95	2023-03-13 18:02:01 - 17.14	2023-03-13 18:36:01 - 17.48
2023-03-13 17:29:01 - 18.09	2023-03-13 18:03:01 - 17.44	2023-03-13 18:37:01 - 17.43
2023-03-13 17:30:01 - 18.13	2023-03-13 18:04:01 - 17.26	2023-03-13 18:38:01 - 17.37
2023-03-13 17:31:01 - 18.0	2023-03-13 18:05:01 - 17.34	2023-03-13 18:39:01 - 17.39
2023-03-13 17:32:01 - 17.95	2023-03-13 18:06:01 - 17.29	2023-03-13 18:40:01 - 17.33
2023-03-13 17:33:01 - 18.0	2023-03-13 18:07:01 - 17.24	2023-03-13 18:41:01 - 17.33

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 18:42:01 - 17.35	2023-03-13 19:16:01 - 18.47	2023-03-13 19:50:01 - 18.49
2023-03-13 18:43:01 - 17.33	2023-03-13 19:17:01 - 18.4	2023-03-13 19:51:01 - 18.37
2023-03-13 18:44:01 - 17.35	2023-03-13 19:18:01 - 18.43	2023-03-13 19:52:01 - 18.44
2023-03-13 18:45:01 - 17.3	2023-03-13 19:19:01 - 18.41	2023-03-13 19:53:01 - 18.45
2023-03-13 18:46:01 - 17.35	2023-03-13 19:20:01 - 18.41	2023-03-13 19:54:01 - 18.47
2023-03-13 18:47:01 - 17.26	2023-03-13 19:21:01 - 18.39	2023-03-13 19:55:01 - 18.43
2023-03-13 18:48:01 - 17.39	2023-03-13 19:22:01 - 18.43	2023-03-13 19:56:01 - 18.46
2023-03-13 18:49:01 - 17.33	2023-03-13 19:23:01 - 18.46	2023-03-13 19:57:01 - 18.44
2023-03-13 18:50:01 - 17.36	2023-03-13 19:24:01 - 18.4	2023-03-13 19:58:01 - 18.48
2023-03-13 18:51:01 - 17.27	2023-03-13 19:25:01 - 18.45	2023-03-13 19:59:01 - 18.77
2023-03-13 18:52:01 - 17.34	2023-03-13 19:26:01 - 18.47	2023-03-13 20:00:01 - 18.3
2023-03-13 18:53:01 - 17.43	2023-03-13 19:27:01 - 18.39	2023-03-13 20:01:01 - 18.32
2023-03-13 18:54:01 - 17.38	2023-03-13 19:28:01 - 18.47	2023-03-13 20:02:01 - 18.32
2023-03-13 18:55:01 - 17.36	2023-03-13 19:29:01 - 18.39	2023-03-13 20:03:01 - 18.19
2023-03-13 18:56:01 - 17.33	2023-03-13 19:30:01 - 18.44	2023-03-13 20:04:01 - 18.26
2023-03-13 18:57:01 - 17.47	2023-03-13 19:31:01 - 18.45	2023-03-13 20:05:01 - 18.31
2023-03-13 18:58:01 - 17.4	2023-03-13 19:32:01 - 18.45	2023-03-13 20:06:01 - 18.39
2023-03-13 18:59:01 - 17.38	2023-03-13 19:33:01 - 18.43	2023-03-13 20:07:01 - 18.31
2023-03-13 19:00:01 - 18.49	2023-03-13 19:34:01 - 18.44	2023-03-13 20:08:01 - 18.31
2023-03-13 19:01:01 - 18.4	2023-03-13 19:35:01 - 18.39	2023-03-13 20:09:01 - 18.29
2023-03-13 19:02:01 - 18.44	2023-03-13 19:36:01 - 18.46	2023-03-13 20:10:01 - 18.34
2023-03-13 19:03:01 - 18.38	2023-03-13 19:37:01 - 18.37	2023-03-13 20:11:01 - 18.18
2023-03-13 19:04:01 - 18.43	2023-03-13 19:38:01 - 18.43	2023-03-13 20:12:01 - 18.14
2023-03-13 19:05:01 - 18.37	2023-03-13 19:39:01 - 18.44	2023-03-13 20:13:01 - 18.27
2023-03-13 19:06:01 - 18.52	2023-03-13 19:40:01 - 18.43	2023-03-13 20:14:01 - 18.25
2023-03-13 19:07:01 - 18.41	2023-03-13 19:41:01 - 18.21	2023-03-13 20:15:01 - 18.41
2023-03-13 19:08:01 - 18.47	2023-03-13 19:42:01 - 18.45	2023-03-13 20:16:01 - 18.32
2023-03-13 19:09:01 - 18.46	2023-03-13 19:43:01 - 18.44	2023-03-13 20:17:01 - 18.19
2023-03-13 19:10:01 - 18.47	2023-03-13 19:44:01 - 18.45	2023-03-13 20:18:01 - 18.33
2023-03-13 19:11:01 - 18.45	2023-03-13 19:45:01 - 18.45	2023-03-13 20:19:01 - 18.29
2023-03-13 19:12:01 - 18.45	2023-03-13 19:46:01 - 18.41	2023-03-13 20:20:01 - 18.45
2023-03-13 19:13:01 - 18.45	2023-03-13 19:47:01 - 18.42	2023-03-13 20:21:01 - 18.33
2023-03-13 19:14:01 - 18.47	2023-03-13 19:48:01 - 18.46	2023-03-13 20:22:01 - 18.35
2023-03-13 19:15:01 - 18.43	2023-03-13 19:49:01 - 18.53	2023-03-13 20:23:01 - 18.3

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 20:24:01 - 18.29	2023-03-13 20:58:01 - 18.24	2023-03-13 21:32:01 - 17.85
2023-03-13 20:25:01 - 18.25	2023-03-13 20:59:01 - 18.06	2023-03-13 21:33:01 - 17.9
2023-03-13 20:26:01 - 18.18	2023-03-13 21:00:01 - 17.76	2023-03-13 21:34:01 - 17.93
2023-03-13 20:27:01 - 18.33	2023-03-13 21:01:01 - 17.92	2023-03-13 21:35:01 - 17.84
2023-03-13 20:28:01 - 18.29	2023-03-13 21:02:01 - 17.9	2023-03-13 21:36:01 - 17.89
2023-03-13 20:29:01 - 18.28	2023-03-13 21:03:01 - 17.97	2023-03-13 21:37:01 - 17.91
2023-03-13 20:30:01 - 18.27	2023-03-13 21:04:01 - 17.91	2023-03-13 21:38:01 - 17.88
2023-03-13 20:31:01 - 18.31	2023-03-13 21:05:01 - 17.9	2023-03-13 21:39:01 - 17.88
2023-03-13 20:32:01 - 18.33	2023-03-13 21:06:01 - 17.87	2023-03-13 21:40:01 - 17.92
2023-03-13 20:33:01 - 18.31	2023-03-13 21:07:01 - 17.89	2023-03-13 21:41:01 - 17.88
2023-03-13 20:34:01 - 18.29	2023-03-13 21:08:01 - 18.01	2023-03-13 21:42:01 - 17.89
2023-03-13 20:35:01 - 18.38	2023-03-13 21:09:01 - 17.78	2023-03-13 21:43:01 - 17.99
2023-03-13 20:36:01 - 18.3	2023-03-13 21:10:01 - 17.89	2023-03-13 21:44:01 - 17.81
2023-03-13 20:37:01 - 18.33	2023-03-13 21:11:01 - 17.92	2023-03-13 21:45:01 - 17.93
2023-03-13 20:38:01 - 18.23	2023-03-13 21:12:01 - 17.86	2023-03-13 21:46:01 - 17.96
2023-03-13 20:39:01 - 18.32	2023-03-13 21:13:01 - 17.81	2023-03-13 21:47:01 - 17.73
2023-03-13 20:40:01 - 18.27	2023-03-13 21:14:01 - 17.89	2023-03-13 21:48:01 - 18.0
2023-03-13 20:41:01 - 18.27	2023-03-13 21:15:01 - 17.91	2023-03-13 21:49:01 - 17.87
2023-03-13 20:42:01 - 18.35	2023-03-13 21:16:01 - 17.9	2023-03-13 21:50:01 - 17.84
2023-03-13 20:43:01 - 18.32	2023-03-13 21:17:01 - 17.9	2023-03-13 21:51:01 - 17.99
2023-03-13 20:44:01 - 18.23	2023-03-13 21:18:01 - 17.84	2023-03-13 21:52:01 - 17.76
2023-03-13 20:45:01 - 18.35	2023-03-13 21:19:01 - 18.08	2023-03-13 21:53:01 - 18.02
2023-03-13 20:46:01 - 18.26	2023-03-13 21:20:01 - 17.88	2023-03-13 21:54:01 - 17.9
2023-03-13 20:47:01 - 18.29	2023-03-13 21:21:01 - 17.86	2023-03-13 21:55:01 - 17.95
2023-03-13 20:48:01 - 18.28	2023-03-13 21:22:01 - 17.79	2023-03-13 21:56:01 - 17.89
2023-03-13 20:49:01 - 18.25	2023-03-13 21:23:01 - 17.89	2023-03-13 21:57:01 - 17.92
2023-03-13 20:50:01 - 18.21	2023-03-13 21:24:01 - 17.96	2023-03-13 21:58:01 - 17.88
2023-03-13 20:51:01 - 18.28	2023-03-13 21:25:01 - 17.89	2023-03-13 21:59:01 - 17.72
2023-03-13 20:52:01 - 18.33	2023-03-13 21:26:01 - 17.85	2023-03-13 22:00:01 - 16.64
2023-03-13 20:53:01 - 18.46	2023-03-13 21:27:01 - 17.87	2023-03-13 22:01:01 - 16.71
2023-03-13 20:54:01 - 18.27	2023-03-13 21:28:01 - 17.88	2023-03-13 22:02:01 - 16.62
2023-03-13 20:55:01 - 18.28	2023-03-13 21:29:01 - 17.91	2023-03-13 22:03:01 - 16.65
2023-03-13 20:56:01 - 18.27	2023-03-13 21:30:01 - 17.89	2023-03-13 22:04:01 - 16.64
2023-03-13 20:57:01 - 18.3	2023-03-13 21:31:01 - 17.84	2023-03-13 22:05:01 - 16.68

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 22:06:01 - 16.75	2023-03-13 22:40:01 - 16.46	2023-03-13 23:14:01 - 17.81
2023-03-13 22:07:01 - 16.72	2023-03-13 22:41:01 - 16.59	2023-03-13 23:15:01 - 17.8
2023-03-13 22:08:01 - 16.61	2023-03-13 22:42:01 - 16.7	2023-03-13 23:16:01 - 17.8
2023-03-13 22:09:01 - 16.64	2023-03-13 22:43:01 - 16.7	2023-03-13 23:17:01 - 17.83
2023-03-13 22:10:01 - 16.55	2023-03-13 22:44:01 - 16.6	2023-03-13 23:18:01 - 17.9
2023-03-13 22:11:01 - 16.64	2023-03-13 22:45:01 - 16.69	2023-03-13 23:19:01 - 17.84
2023-03-13 22:12:01 - 16.65	2023-03-13 22:46:01 - 16.65	2023-03-13 23:20:01 - 17.86
2023-03-13 22:13:01 - 16.62	2023-03-13 22:47:01 - 16.61	2023-03-13 23:21:01 - 17.61
2023-03-13 22:14:01 - 16.6	2023-03-13 22:48:01 - 16.67	2023-03-13 23:22:01 - 17.78
2023-03-13 22:15:01 - 16.64	2023-03-13 22:49:01 - 16.59	2023-03-13 23:23:01 - 17.87
2023-03-13 22:16:01 - 16.66	2023-03-13 22:50:01 - 16.63	2023-03-13 23:24:01 - 17.81
2023-03-13 22:17:01 - 16.66	2023-03-13 22:51:01 - 16.74	2023-03-13 23:25:01 - 17.92
2023-03-13 22:18:01 - 16.64	2023-03-13 22:52:01 - 16.58	2023-03-13 23:26:01 - 17.79
2023-03-13 22:19:01 - 16.65	2023-03-13 22:53:01 - 16.68	2023-03-13 23:27:01 - 17.97
2023-03-13 22:20:01 - 16.66	2023-03-13 22:54:01 - 16.69	2023-03-13 23:28:01 - 17.68
2023-03-13 22:21:01 - 16.64	2023-03-13 22:55:01 - 16.59	2023-03-13 23:29:01 - 17.79
2023-03-13 22:22:01 - 16.67	2023-03-13 22:56:01 - 16.67	2023-03-13 23:30:01 - 17.85
2023-03-13 22:23:01 - 16.65	2023-03-13 22:57:01 - 16.62	2023-03-13 23:31:01 - 17.74
2023-03-13 22:24:01 - 16.69	2023-03-13 22:58:01 - 16.54	2023-03-13 23:32:01 - 17.83
2023-03-13 22:25:01 - 16.52	2023-03-13 22:59:01 - 17.02	2023-03-13 23:33:01 - 17.79
2023-03-13 22:26:01 - 16.68	2023-03-13 23:00:01 - 18.0	2023-03-13 23:34:01 - 17.82
2023-03-13 22:27:01 - 16.65	2023-03-13 23:01:01 - 17.83	2023-03-13 23:35:01 - 17.88
2023-03-13 22:28:01 - 16.54	2023-03-13 23:02:01 - 17.8	2023-03-13 23:36:01 - 17.82
2023-03-13 22:29:01 - 16.63	2023-03-13 23:03:01 - 17.72	2023-03-13 23:37:01 - 17.86
2023-03-13 22:30:01 - 16.75	2023-03-13 23:04:01 - 17.85	2023-03-13 23:38:01 - 17.93
2023-03-13 22:31:01 - 16.65	2023-03-13 23:05:01 - 17.77	2023-03-13 23:39:01 - 17.75
2023-03-13 22:32:01 - 16.63	2023-03-13 23:06:01 - 17.86	2023-03-13 23:40:01 - 17.82
2023-03-13 22:33:01 - 16.8	2023-03-13 23:07:01 - 17.9	2023-03-13 23:41:01 - 17.85
2023-03-13 22:34:01 - 16.62	2023-03-13 23:08:01 - 17.75	2023-03-13 23:42:01 - 17.83
2023-03-13 22:35:01 - 16.73	2023-03-13 23:09:01 - 17.85	2023-03-13 23:43:01 - 17.86
2023-03-13 22:36:01 - 16.66	2023-03-13 23:10:01 - 17.79	2023-03-13 23:44:01 - 17.83
2023-03-13 22:37:01 - 16.62	2023-03-13 23:11:01 - 17.82	2023-03-13 23:45:01 - 17.84
2023-03-13 22:38:01 - 16.66	2023-03-13 23:12:01 - 17.82	2023-03-13 23:46:01 - 17.83
2023-03-13 22:39:01 - 16.57	2023-03-13 23:13:01 - 17.82	2023-03-13 23:47:01 - 17.78

Horário/Leitura

2023-03-13 23:48:01 - 17.82

2023-03-13 23:49:01 - 17.85

2023-03-13 23:50:01 - 17.82

2023-03-13 23:51:01 - 17.79

2023-03-13 23:52:01 - 17.91

2023-03-13 23:53:01 - 17.84

2023-03-13 23:54:01 - 17.72

2023-03-13 23:55:01 - 17.87

2023-03-13 23:56:01 - 17.87

2023-03-13 23:57:01 - 17.68

2023-03-13 23:58:01 - 17.87

2023-03-13 23:59:01 - 17.61

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 00:00:46 - 21.97	2023-03-13 00:34:46 - 21.89	2023-03-13 01:08:46 - 21.78
2023-03-13 00:01:46 - 21.85	2023-03-13 00:35:46 - 21.92	2023-03-13 01:09:46 - 21.76
2023-03-13 00:02:46 - 21.99	2023-03-13 00:36:46 - 21.84	2023-03-13 01:10:46 - 21.72
2023-03-13 00:03:46 - 21.95	2023-03-13 00:37:46 - 21.92	2023-03-13 01:11:46 - 21.78
2023-03-13 00:04:46 - 21.93	2023-03-13 00:38:46 - 21.96	2023-03-13 01:12:46 - 21.78
2023-03-13 00:05:46 - 22.01	2023-03-13 00:39:46 - 22.0	2023-03-13 01:13:46 - 21.75
2023-03-13 00:06:46 - 21.95	2023-03-13 00:40:46 - 22.01	2023-03-13 01:14:46 - 21.74
2023-03-13 00:07:46 - 21.88	2023-03-13 00:41:46 - 21.88	2023-03-13 01:15:46 - 21.72
2023-03-13 00:08:46 - 21.93	2023-03-13 00:42:46 - 21.94	2023-03-13 01:16:46 - 21.8
2023-03-13 00:09:46 - 21.91	2023-03-13 00:43:46 - 21.95	2023-03-13 01:17:46 - 21.76
2023-03-13 00:10:46 - 22.05	2023-03-13 00:44:46 - 21.87	2023-03-13 01:18:46 - 21.7
2023-03-13 00:11:46 - 21.92	2023-03-13 00:45:46 - 21.91	2023-03-13 01:19:46 - 21.73
2023-03-13 00:12:46 - 21.92	2023-03-13 00:46:46 - 21.94	2023-03-13 01:20:46 - 21.82
2023-03-13 00:13:46 - 21.81	2023-03-13 00:47:46 - 21.98	2023-03-13 01:21:46 - 21.95
2023-03-13 00:14:46 - 21.85	2023-03-13 00:48:46 - 21.92	2023-03-13 01:22:46 - 21.78
2023-03-13 00:15:46 - 21.86	2023-03-13 00:49:46 - 21.92	2023-03-13 01:23:46 - 21.69
2023-03-13 00:16:46 - 21.91	2023-03-13 00:50:46 - 21.98	2023-03-13 01:24:46 - 21.7
2023-03-13 00:17:46 - 22.0	2023-03-13 00:51:46 - 21.89	2023-03-13 01:25:46 - 21.76
2023-03-13 00:18:46 - 21.92	2023-03-13 00:52:46 - 21.87	2023-03-13 01:26:46 - 21.79
2023-03-13 00:19:46 - 21.95	2023-03-13 00:53:46 - 21.98	2023-03-13 01:27:46 - 21.79
2023-03-13 00:20:46 - 21.97	2023-03-13 00:54:46 - 21.88	2023-03-13 01:28:46 - 21.84
2023-03-13 00:21:46 - 21.92	2023-03-13 00:55:46 - 21.96	2023-03-13 01:29:46 - 21.78
2023-03-13 00:22:46 - 21.78	2023-03-13 00:56:46 - 21.91	2023-03-13 01:30:46 - 21.76
2023-03-13 00:23:46 - 21.91	2023-03-13 00:57:46 - 21.94	2023-03-13 01:31:46 - 21.74
2023-03-13 00:24:46 - 21.87	2023-03-13 00:58:46 - 21.9	2023-03-13 01:32:46 - 21.83
2023-03-13 00:25:46 - 21.84	2023-03-13 00:59:46 - 21.59	2023-03-13 01:33:46 - 21.71
2023-03-13 00:26:46 - 21.95	2023-03-13 01:00:46 - 21.72	2023-03-13 01:34:46 - 21.8
2023-03-13 00:27:46 - 21.95	2023-03-13 01:01:46 - 21.75	2023-03-13 01:35:46 - 21.76
2023-03-13 00:28:46 - 22.09	2023-03-13 01:02:46 - 21.73	2023-03-13 01:36:46 - 21.76
2023-03-13 00:29:46 - 21.91	2023-03-13 01:03:46 - 21.76	2023-03-13 01:37:46 - 21.75
2023-03-13 00:30:46 - 21.91	2023-03-13 01:04:46 - 21.71	2023-03-13 01:38:46 - 21.76
2023-03-13 00:31:46 - 21.98	2023-03-13 01:05:46 - 21.82	2023-03-13 01:39:46 - 21.66
2023-03-13 00:32:46 - 21.89	2023-03-13 01:06:46 - 21.7	2023-03-13 01:40:46 - 21.68
2023-03-13 00:33:46 - 21.89	2023-03-13 01:07:46 - 21.74	2023-03-13 01:41:46 - 21.68

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 01:42:46 - 21.73	2023-03-13 02:16:46 - 21.52	2023-03-13 02:50:46 - 21.57
2023-03-13 01:43:46 - 21.69	2023-03-13 02:17:46 - 21.58	2023-03-13 02:51:46 - 21.53
2023-03-13 01:44:46 - 21.7	2023-03-13 02:18:46 - 21.7	2023-03-13 02:52:46 - 21.66
2023-03-13 01:45:46 - 21.79	2023-03-13 02:19:46 - 21.69	2023-03-13 02:53:46 - 21.47
2023-03-13 01:46:46 - 21.67	2023-03-13 02:20:46 - 21.57	2023-03-13 02:54:46 - 21.55
2023-03-13 01:47:46 - 21.77	2023-03-13 02:21:46 - 21.62	2023-03-13 02:55:46 - 21.56
2023-03-13 01:48:46 - 21.65	2023-03-13 02:22:46 - 21.56	2023-03-13 02:56:46 - 21.56
2023-03-13 01:49:46 - 21.78	2023-03-13 02:23:46 - 21.56	2023-03-13 02:57:46 - 21.55
2023-03-13 01:50:46 - 21.75	2023-03-13 02:24:46 - 21.45	2023-03-13 02:58:46 - 21.55
2023-03-13 01:51:46 - 21.78	2023-03-13 02:25:46 - 21.55	2023-03-13 02:59:46 - 21.04
2023-03-13 01:52:46 - 21.78	2023-03-13 02:26:46 - 21.6	2023-03-13 03:00:46 - 21.45
2023-03-13 01:53:46 - 21.71	2023-03-13 02:27:46 - 21.64	2023-03-13 03:01:46 - 21.39
2023-03-13 01:54:46 - 21.74	2023-03-13 02:28:46 - 21.54	2023-03-13 03:02:46 - 21.4
2023-03-13 01:55:46 - 21.61	2023-03-13 02:29:46 - 21.47	2023-03-13 03:03:46 - 21.42
2023-03-13 01:56:46 - 21.86	2023-03-13 02:30:46 - 21.62	2023-03-13 03:04:46 - 21.5
2023-03-13 01:57:46 - 21.75	2023-03-13 02:31:46 - 21.58	2023-03-13 03:05:46 - 21.44
2023-03-13 01:58:46 - 21.78	2023-03-13 02:32:46 - 21.62	2023-03-13 03:06:46 - 21.42
2023-03-13 01:59:46 - 22.29	2023-03-13 02:33:46 - 21.58	2023-03-13 03:07:46 - 21.47
2023-03-13 02:00:46 - 21.51	2023-03-13 02:34:46 - 21.59	2023-03-13 03:08:46 - 21.48
2023-03-13 02:01:46 - 21.47	2023-03-13 02:35:46 - 21.56	2023-03-13 03:09:46 - 21.41
2023-03-13 02:02:46 - 21.61	2023-03-13 02:36:46 - 21.56	2023-03-13 03:10:46 - 21.46
2023-03-13 02:03:46 - 21.56	2023-03-13 02:37:46 - 21.54	2023-03-13 03:11:46 - 21.28
2023-03-13 02:04:46 - 21.64	2023-03-13 02:38:46 - 21.59	2023-03-13 03:12:46 - 21.44
2023-03-13 02:05:46 - 21.59	2023-03-13 02:39:46 - 21.72	2023-03-13 03:13:46 - 21.4
2023-03-13 02:06:46 - 21.34	2023-03-13 02:40:46 - 21.59	2023-03-13 03:14:46 - 21.39
2023-03-13 02:07:46 - 21.56	2023-03-13 02:41:46 - 21.62	2023-03-13 03:15:46 - 21.44
2023-03-13 02:08:46 - 21.61	2023-03-13 02:42:46 - 21.8	2023-03-13 03:16:46 - 21.32
2023-03-13 02:09:46 - 21.58	2023-03-13 02:43:46 - 21.59	2023-03-13 03:17:46 - 21.51
2023-03-13 02:10:46 - 21.62	2023-03-13 02:44:46 - 21.58	2023-03-13 03:18:46 - 21.43
2023-03-13 02:11:46 - 21.47	2023-03-13 02:45:46 - 21.59	2023-03-13 03:19:46 - 21.4
2023-03-13 02:12:46 - 21.65	2023-03-13 02:46:46 - 21.52	2023-03-13 03:20:46 - 21.42
2023-03-13 02:13:46 - 21.71	2023-03-13 02:47:46 - 21.56	2023-03-13 03:21:46 - 21.44
2023-03-13 02:14:46 - 21.57	2023-03-13 02:48:46 - 21.67	2023-03-13 03:22:46 - 21.43
2023-03-13 02:15:46 - 21.59	2023-03-13 02:49:46 - 21.58	2023-03-13 03:23:46 - 21.59

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 03:24:46 - 21.46	2023-03-13 03:58:46 - 21.51	2023-03-13 04:32:46 - 21.3
2023-03-13 03:25:46 - 21.4	2023-03-13 03:59:46 - 20.95	2023-03-13 04:33:46 - 21.29
2023-03-13 03:26:46 - 21.43	2023-03-13 04:00:46 - 21.27	2023-03-13 04:34:46 - 21.2
2023-03-13 03:27:46 - 21.41	2023-03-13 04:01:46 - 21.1	2023-03-13 04:35:46 - 21.29
2023-03-13 03:28:46 - 21.44	2023-03-13 04:02:46 - 21.33	2023-03-13 04:36:46 - 21.24
2023-03-13 03:29:46 - 21.39	2023-03-13 04:03:46 - 21.36	2023-03-13 04:37:46 - 21.18
2023-03-13 03:30:46 - 21.49	2023-03-13 04:04:46 - 21.22	2023-03-13 04:38:46 - 21.18
2023-03-13 03:31:46 - 21.45	2023-03-13 04:05:46 - 21.21	2023-03-13 04:39:46 - 21.15
2023-03-13 03:32:46 - 21.42	2023-03-13 04:06:46 - 21.27	2023-03-13 04:40:46 - 21.24
2023-03-13 03:33:46 - 21.51	2023-03-13 04:07:46 - 21.3	2023-03-13 04:41:46 - 21.18
2023-03-13 03:34:46 - 21.54	2023-03-13 04:08:46 - 21.26	2023-03-13 04:42:46 - 21.35
2023-03-13 03:35:46 - 21.41	2023-03-13 04:09:46 - 21.23	2023-03-13 04:43:46 - 21.28
2023-03-13 03:36:46 - 21.3	2023-03-13 04:10:46 - 21.24	2023-03-13 04:44:46 - 21.27
2023-03-13 03:37:46 - 21.47	2023-03-13 04:11:46 - 21.34	2023-03-13 04:45:46 - 21.27
2023-03-13 03:38:46 - 21.41	2023-03-13 04:12:46 - 21.26	2023-03-13 04:46:46 - 21.3
2023-03-13 03:39:46 - 21.46	2023-03-13 04:13:46 - 21.33	2023-03-13 04:47:46 - 21.26
2023-03-13 03:40:46 - 21.44	2023-03-13 04:14:46 - 21.46	2023-03-13 04:48:46 - 21.3
2023-03-13 03:41:46 - 21.38	2023-03-13 04:15:46 - 21.25	2023-03-13 04:49:46 - 21.23
2023-03-13 03:42:46 - 21.41	2023-03-13 04:16:46 - 21.28	2023-03-13 04:50:46 - 21.29
2023-03-13 03:43:46 - 21.49	2023-03-13 04:17:46 - 21.25	2023-03-13 04:51:46 - 21.45
2023-03-13 03:44:46 - 21.38	2023-03-13 04:18:46 - 21.25	2023-03-13 04:52:46 - 21.22
2023-03-13 03:45:46 - 21.46	2023-03-13 04:19:46 - 21.34	2023-03-13 04:53:46 - 21.22
2023-03-13 03:46:46 - 21.44	2023-03-13 04:20:46 - 21.3	2023-03-13 04:54:46 - 21.32
2023-03-13 03:47:46 - 21.43	2023-03-13 04:21:46 - 21.2	2023-03-13 04:55:46 - 21.35
2023-03-13 03:48:46 - 21.6	2023-03-13 04:22:46 - 21.33	2023-03-13 04:56:46 - 21.21
2023-03-13 03:49:46 - 21.43	2023-03-13 04:23:46 - 21.31	2023-03-13 04:57:46 - 21.22
2023-03-13 03:50:46 - 21.38	2023-03-13 04:24:46 - 21.21	2023-03-13 04:58:46 - 21.26
2023-03-13 03:51:46 - 21.49	2023-03-13 04:25:46 - 21.19	2023-03-13 04:59:46 - 20.8
2023-03-13 03:52:46 - 21.42	2023-03-13 04:26:46 - 21.31	2023-03-13 05:00:46 - 21.0
2023-03-13 03:53:46 - 21.5	2023-03-13 04:27:46 - 21.31	2023-03-13 05:01:46 - 20.91
2023-03-13 03:54:46 - 21.42	2023-03-13 04:28:46 - 21.21	2023-03-13 05:02:46 - 20.9
2023-03-13 03:55:46 - 21.45	2023-03-13 04:29:46 - 21.28	2023-03-13 05:03:46 - 20.95
2023-03-13 03:56:46 - 21.48	2023-03-13 04:30:46 - 21.15	2023-03-13 05:04:46 - 20.95
2023-03-13 03:57:46 - 21.45	2023-03-13 04:31:46 - 21.38	2023-03-13 05:05:46 - 20.99

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 05:06:46 - 20.91	2023-03-13 05:40:46 - 21.11	2023-03-13 06:14:46 - 19.61
2023-03-13 05:07:46 - 20.86	2023-03-13 05:41:46 - 20.71	2023-03-13 06:15:46 - 19.51
2023-03-13 05:08:46 - 20.93	2023-03-13 05:42:46 - 20.81	2023-03-13 06:16:46 - 19.63
2023-03-13 05:09:46 - 20.86	2023-03-13 05:43:46 - 21.04	2023-03-13 06:17:46 - 19.68
2023-03-13 05:10:46 - 20.9	2023-03-13 05:44:46 - 20.88	2023-03-13 06:18:46 - 19.67
2023-03-13 05:11:46 - 20.87	2023-03-13 05:45:46 - 20.89	2023-03-13 06:19:46 - 19.59
2023-03-13 05:12:46 - 20.85	2023-03-13 05:46:46 - 20.95	2023-03-13 06:20:46 - 19.52
2023-03-13 05:13:46 - 20.9	2023-03-13 05:47:46 - 20.87	2023-03-13 06:21:46 - 19.69
2023-03-13 05:14:46 - 20.88	2023-03-13 05:48:46 - 20.88	2023-03-13 06:22:46 - 19.63
2023-03-13 05:15:46 - 20.93	2023-03-13 05:49:46 - 21.0	2023-03-13 06:23:46 - 19.61
2023-03-13 05:16:46 - 20.9	2023-03-13 05:50:46 - 20.89	2023-03-13 06:24:46 - 19.6
2023-03-13 05:17:46 - 20.89	2023-03-13 05:51:46 - 20.87	2023-03-13 06:25:46 - 19.59
2023-03-13 05:18:46 - 20.88	2023-03-13 05:52:46 - 20.89	2023-03-13 06:26:46 - 19.63
2023-03-13 05:19:46 - 20.88	2023-03-13 05:53:46 - 20.85	2023-03-13 06:27:46 - 19.63
2023-03-13 05:20:46 - 20.83	2023-03-13 05:54:46 - 20.81	2023-03-13 06:28:46 - 19.57
2023-03-13 05:21:46 - 20.88	2023-03-13 05:55:46 - 20.92	2023-03-13 06:29:46 - 19.69
2023-03-13 05:22:46 - 20.85	2023-03-13 05:56:46 - 20.8	2023-03-13 06:30:46 - 19.58
2023-03-13 05:23:46 - 20.88	2023-03-13 05:57:46 - 20.82	2023-03-13 06:31:46 - 19.78
2023-03-13 05:24:46 - 20.87	2023-03-13 05:58:46 - 20.9	2023-03-13 06:32:46 - 19.63
2023-03-13 05:25:46 - 20.92	2023-03-13 05:59:46 - 20.02	2023-03-13 06:33:46 - 19.64
2023-03-13 05:26:46 - 20.92	2023-03-13 06:00:46 - 19.67	2023-03-13 06:34:46 - 19.62
2023-03-13 05:27:46 - 20.85	2023-03-13 06:01:46 - 19.46	2023-03-13 06:35:46 - 19.67
2023-03-13 05:28:46 - 20.9	2023-03-13 06:02:46 - 19.66	2023-03-13 06:36:46 - 19.64
2023-03-13 05:29:46 - 20.87	2023-03-13 06:03:46 - 19.71	2023-03-13 06:37:46 - 19.59
2023-03-13 05:30:46 - 20.84	2023-03-13 06:04:46 - 19.67	2023-03-13 06:38:46 - 19.66
2023-03-13 05:31:46 - 20.87	2023-03-13 06:05:46 - 19.66	2023-03-13 06:39:46 - 19.62
2023-03-13 05:32:46 - 20.94	2023-03-13 06:06:46 - 19.68	2023-03-13 06:40:46 - 19.64
2023-03-13 05:33:46 - 20.86	2023-03-13 06:07:46 - 19.65	2023-03-13 06:41:46 - 19.57
2023-03-13 05:34:46 - 21.06	2023-03-13 06:08:46 - 19.68	2023-03-13 06:42:46 - 19.58
2023-03-13 05:35:46 - 20.78	2023-03-13 06:09:46 - 19.64	2023-03-13 06:43:46 - 19.47
2023-03-13 05:36:46 - 20.95	2023-03-13 06:10:46 - 19.63	2023-03-13 06:44:46 - 19.57
2023-03-13 05:37:46 - 21.0	2023-03-13 06:11:46 - 19.62	2023-03-13 06:45:46 - 19.68
2023-03-13 05:38:46 - 20.89	2023-03-13 06:12:46 - 19.73	2023-03-13 06:46:46 - 19.67
2023-03-13 05:39:46 - 20.8	2023-03-13 06:13:46 - 19.64	2023-03-13 06:47:46 - 19.57

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 06:48:46 - 19.69	2023-03-13 07:22:46 - 17.91	2023-03-13 07:56:46 - 17.95
2023-03-13 06:49:46 - 19.55	2023-03-13 07:23:46 - 17.89	2023-03-13 07:57:46 - 17.95
2023-03-13 06:50:46 - 19.67	2023-03-13 07:24:46 - 17.93	2023-03-13 07:58:46 - 17.98
2023-03-13 06:51:46 - 19.63	2023-03-13 07:25:46 - 17.95	2023-03-13 07:59:46 - 18.54
2023-03-13 06:52:46 - 19.65	2023-03-13 07:26:46 - 17.95	2023-03-13 08:00:46 - 18.22
2023-03-13 06:53:46 - 19.64	2023-03-13 07:27:46 - 17.9	2023-03-13 08:01:46 - 18.21
2023-03-13 06:54:46 - 19.58	2023-03-13 07:28:46 - 17.91	2023-03-13 08:02:46 - 18.18
2023-03-13 06:55:46 - 19.66	2023-03-13 07:29:46 - 18.0	2023-03-13 08:03:46 - 18.21
2023-03-13 06:56:46 - 19.59	2023-03-13 07:30:46 - 18.0	2023-03-13 08:04:46 - 18.12
2023-03-13 06:57:46 - 19.55	2023-03-13 07:31:46 - 17.95	2023-03-13 08:05:46 - 18.21
2023-03-13 06:58:46 - 19.6	2023-03-13 07:32:46 - 18.03	2023-03-13 08:06:46 - 18.14
2023-03-13 06:59:46 - 19.81	2023-03-13 07:33:46 - 17.82	2023-03-13 08:07:46 - 18.14
2023-03-13 07:00:46 - 17.88	2023-03-13 07:34:46 - 17.96	2023-03-13 08:08:46 - 18.24
2023-03-13 07:01:46 - 17.94	2023-03-13 07:35:46 - 17.98	2023-03-13 08:09:46 - 18.21
2023-03-13 07:02:46 - 18.05	2023-03-13 07:36:46 - 18.11	2023-03-13 08:10:46 - 18.22
2023-03-13 07:03:46 - 18.0	2023-03-13 07:37:46 - 17.94	2023-03-13 08:11:46 - 18.31
2023-03-13 07:04:46 - 17.91	2023-03-13 07:38:46 - 17.94	2023-03-13 08:12:46 - 18.12
2023-03-13 07:05:46 - 17.91	2023-03-13 07:39:46 - 17.94	2023-03-13 08:13:46 - 18.32
2023-03-13 07:06:46 - 17.94	2023-03-13 07:40:46 - 17.95	2023-03-13 08:14:46 - 18.17
2023-03-13 07:07:46 - 18.02	2023-03-13 07:41:46 - 17.95	2023-03-13 08:15:46 - 18.19
2023-03-13 07:08:46 - 17.93	2023-03-13 07:42:46 - 17.94	2023-03-13 08:16:46 - 18.19
2023-03-13 07:09:46 - 17.85	2023-03-13 07:43:46 - 17.93	2023-03-13 08:17:46 - 18.29
2023-03-13 07:10:46 - 17.96	2023-03-13 07:44:46 - 17.88	2023-03-13 08:18:46 - 18.45
2023-03-13 07:11:46 - 18.05	2023-03-13 07:45:46 - 18.07	2023-03-13 08:19:46 - 18.14
2023-03-13 07:12:46 - 17.88	2023-03-13 07:46:46 - 17.82	2023-03-13 08:20:46 - 18.21
2023-03-13 07:13:46 - 17.74	2023-03-13 07:47:46 - 17.92	2023-03-13 08:21:46 - 18.22
2023-03-13 07:14:46 - 17.86	2023-03-13 07:48:46 - 17.94	2023-03-13 08:22:46 - 18.19
2023-03-13 07:15:46 - 17.96	2023-03-13 07:49:46 - 18.02	2023-03-13 08:23:46 - 18.2
2023-03-13 07:16:46 - 17.92	2023-03-13 07:50:46 - 17.92	2023-03-13 08:24:46 - 18.29
2023-03-13 07:17:46 - 17.94	2023-03-13 07:51:46 - 17.93	2023-03-13 08:25:46 - 18.25
2023-03-13 07:18:46 - 17.93	2023-03-13 07:52:46 - 17.86	2023-03-13 08:26:46 - 18.27
2023-03-13 07:19:46 - 18.0	2023-03-13 07:53:46 - 17.83	2023-03-13 08:27:46 - 18.16
2023-03-13 07:20:46 - 17.97	2023-03-13 07:54:46 - 18.06	2023-03-13 08:28:46 - 18.16
2023-03-13 07:21:46 - 17.98	2023-03-13 07:55:46 - 17.84	2023-03-13 08:29:46 - 18.19

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 08:30:46 - 18.21	2023-03-13 09:04:46 - 19.84	2023-03-13 09:38:46 - 19.73
2023-03-13 08:31:46 - 18.34	2023-03-13 09:05:46 - 19.79	2023-03-13 09:39:46 - 19.64
2023-03-13 08:32:46 - 18.26	2023-03-13 09:06:46 - 19.72	2023-03-13 09:40:46 - 19.73
2023-03-13 08:33:46 - 18.24	2023-03-13 09:07:46 - 19.72	2023-03-13 09:41:46 - 19.82
2023-03-13 08:34:46 - 18.24	2023-03-13 09:08:46 - 19.81	2023-03-13 09:42:46 - 19.76
2023-03-13 08:35:46 - 18.22	2023-03-13 09:09:46 - 19.66	2023-03-13 09:43:46 - 19.7
2023-03-13 08:36:46 - 18.19	2023-03-13 09:10:46 - 19.75	2023-03-13 09:44:46 - 19.68
2023-03-13 08:37:46 - 18.33	2023-03-13 09:11:46 - 19.75	2023-03-13 09:45:46 - 19.66
2023-03-13 08:38:46 - 18.21	2023-03-13 09:12:46 - 19.7	2023-03-13 09:46:46 - 19.86
2023-03-13 08:39:46 - 18.23	2023-03-13 09:13:46 - 19.73	2023-03-13 09:47:46 - 19.96
2023-03-13 08:40:46 - 18.28	2023-03-13 09:14:46 - 19.73	2023-03-13 09:48:46 - 19.68
2023-03-13 08:41:46 - 18.22	2023-03-13 09:15:46 - 19.76	2023-03-13 09:49:46 - 19.85
2023-03-13 08:42:46 - 18.2	2023-03-13 09:16:46 - 19.68	2023-03-13 09:50:46 - 19.56
2023-03-13 08:43:46 - 18.12	2023-03-13 09:17:46 - 19.91	2023-03-13 09:51:46 - 19.76
2023-03-13 08:44:46 - 18.18	2023-03-13 09:18:46 - 19.73	2023-03-13 09:52:46 - 19.73
2023-03-13 08:45:46 - 18.24	2023-03-13 09:19:46 - 19.74	2023-03-13 09:53:46 - 19.76
2023-03-13 08:46:46 - 18.33	2023-03-13 09:20:46 - 19.74	2023-03-13 09:54:46 - 19.82
2023-03-13 08:47:46 - 18.19	2023-03-13 09:21:46 - 19.77	2023-03-13 09:55:46 - 19.62
2023-03-13 08:48:46 - 18.25	2023-03-13 09:22:46 - 19.72	2023-03-13 09:56:46 - 19.7
2023-03-13 08:49:46 - 18.24	2023-03-13 09:23:46 - 19.61	2023-03-13 09:57:46 - 19.73
2023-03-13 08:50:46 - 18.24	2023-03-13 09:24:46 - 19.82	2023-03-13 09:58:46 - 19.8
2023-03-13 08:51:46 - 18.18	2023-03-13 09:25:46 - 19.72	2023-03-13 09:59:46 - 20.15
2023-03-13 08:52:46 - 18.21	2023-03-13 09:26:46 - 19.68	2023-03-13 10:00:46 - 17.63
2023-03-13 08:53:46 - 18.25	2023-03-13 09:27:46 - 19.76	2023-03-13 10:01:46 - 17.63
2023-03-13 08:54:46 - 18.09	2023-03-13 09:28:46 - 19.74	2023-03-13 10:02:46 - 17.59
2023-03-13 08:55:46 - 18.24	2023-03-13 09:29:46 - 19.72	2023-03-13 10:03:46 - 17.63
2023-03-13 08:56:46 - 18.18	2023-03-13 09:30:46 - 19.75	2023-03-13 10:04:46 - 17.53
2023-03-13 08:57:46 - 18.29	2023-03-13 09:31:46 - 19.77	2023-03-13 10:05:46 - 17.63
2023-03-13 08:58:46 - 18.16	2023-03-13 09:32:46 - 19.8	2023-03-13 10:06:46 - 17.6
2023-03-13 08:59:46 - 18.18	2023-03-13 09:33:46 - 19.82	2023-03-13 10:07:46 - 17.59
2023-03-13 09:00:46 - 19.62	2023-03-13 09:34:46 - 19.86	2023-03-13 10:08:46 - 17.61
2023-03-13 09:01:46 - 19.69	2023-03-13 09:35:46 - 19.6	2023-03-13 10:09:46 - 17.46
2023-03-13 09:02:46 - 19.75	2023-03-13 09:36:46 - 19.77	2023-03-13 10:10:46 - 17.62
2023-03-13 09:03:46 - 19.86	2023-03-13 09:37:46 - 19.73	2023-03-13 10:11:46 - 17.52

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 10:12:46 - 17.68	2023-03-13 10:46:46 - 17.6	2023-03-13 11:20:46 - 18.43
2023-03-13 10:13:46 - 17.6	2023-03-13 10:47:46 - 17.61	2023-03-13 11:21:46 - 18.5
2023-03-13 10:14:46 - 17.6	2023-03-13 10:48:46 - 17.83	2023-03-13 11:22:46 - 18.45
2023-03-13 10:15:46 - 17.68	2023-03-13 10:49:46 - 17.74	2023-03-13 11:23:46 - 18.31
2023-03-13 10:16:46 - 17.62	2023-03-13 10:50:46 - 17.62	2023-03-13 11:24:46 - 18.46
2023-03-13 10:17:46 - 17.55	2023-03-13 10:51:46 - 17.78	2023-03-13 11:25:46 - 18.42
2023-03-13 10:18:46 - 17.71	2023-03-13 10:52:46 - 17.6	2023-03-13 11:26:46 - 18.49
2023-03-13 10:19:46 - 17.63	2023-03-13 10:53:46 - 17.6	2023-03-13 11:27:46 - 18.4
2023-03-13 10:20:46 - 17.64	2023-03-13 10:54:46 - 17.64	2023-03-13 11:28:46 - 18.43
2023-03-13 10:21:46 - 17.6	2023-03-13 10:55:46 - 17.64	2023-03-13 11:29:46 - 18.4
2023-03-13 10:22:46 - 17.6	2023-03-13 10:56:46 - 17.56	2023-03-13 11:30:46 - 18.38
2023-03-13 10:23:46 - 17.66	2023-03-13 10:57:46 - 17.62	2023-03-13 11:31:46 - 18.53
2023-03-13 10:24:46 - 17.59	2023-03-13 10:58:46 - 17.63	2023-03-13 11:32:46 - 18.54
2023-03-13 10:25:46 - 17.61	2023-03-13 10:59:46 - 17.18	2023-03-13 11:33:46 - 18.34
2023-03-13 10:26:46 - 17.63	2023-03-13 11:00:46 - 18.43	2023-03-13 11:34:46 - 18.42
2023-03-13 10:27:46 - 17.58	2023-03-13 11:01:46 - 18.49	2023-03-13 11:35:46 - 18.34
2023-03-13 10:28:46 - 17.64	2023-03-13 11:02:46 - 18.45	2023-03-13 11:36:46 - 18.35
2023-03-13 10:29:46 - 17.6	2023-03-13 11:03:46 - 18.43	2023-03-13 11:37:46 - 18.41
2023-03-13 10:30:46 - 17.54	2023-03-13 11:04:46 - 18.28	2023-03-13 11:38:46 - 18.48
2023-03-13 10:31:46 - 17.62	2023-03-13 11:05:46 - 18.43	2023-03-13 11:39:46 - 18.29
2023-03-13 10:32:46 - 17.61	2023-03-13 11:06:46 - 18.29	2023-03-13 11:40:46 - 18.42
2023-03-13 10:33:46 - 17.6	2023-03-13 11:07:46 - 18.31	2023-03-13 11:41:46 - 18.35
2023-03-13 10:34:46 - 17.57	2023-03-13 11:08:46 - 18.45	2023-03-13 11:42:46 - 18.47
2023-03-13 10:35:46 - 17.64	2023-03-13 11:09:46 - 18.4	2023-03-13 11:43:46 - 18.45
2023-03-13 10:36:46 - 17.63	2023-03-13 11:10:46 - 18.54	2023-03-13 11:44:46 - 18.46
2023-03-13 10:37:46 - 17.68	2023-03-13 11:11:46 - 18.41	2023-03-13 11:45:46 - 18.53
2023-03-13 10:38:46 - 17.56	2023-03-13 11:12:46 - 18.47	2023-03-13 11:46:46 - 18.45
2023-03-13 10:39:46 - 17.66	2023-03-13 11:13:46 - 18.43	2023-03-13 11:47:46 - 18.37
2023-03-13 10:40:46 - 17.82	2023-03-13 11:14:46 - 18.5	2023-03-13 11:48:46 - 18.49
2023-03-13 10:41:46 - 17.67	2023-03-13 11:15:46 - 18.42	2023-03-13 11:49:46 - 18.45
2023-03-13 10:42:46 - 17.63	2023-03-13 11:16:46 - 18.43	2023-03-13 11:50:46 - 18.44
2023-03-13 10:43:46 - 17.7	2023-03-13 11:17:46 - 18.41	2023-03-13 11:51:46 - 18.42
2023-03-13 10:44:46 - 17.77	2023-03-13 11:18:46 - 18.47	2023-03-13 11:52:46 - 18.38
2023-03-13 10:45:46 - 17.63	2023-03-13 11:19:46 - 18.42	2023-03-13 11:53:46 - 18.44

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 11:54:46 - 18.44	2023-03-13 12:28:46 - 18.32	2023-03-13 13:02:46 - 20.58
2023-03-13 11:55:46 - 18.4	2023-03-13 12:29:46 - 18.23	2023-03-13 13:03:46 - 20.51
2023-03-13 11:56:46 - 18.41	2023-03-13 12:30:46 - 18.31	2023-03-13 13:04:46 - 20.44
2023-03-13 11:57:46 - 18.42	2023-03-13 12:31:46 - 18.26	2023-03-13 13:05:46 - 20.78
2023-03-13 11:58:46 - 18.25	2023-03-13 12:32:46 - 18.24	2023-03-13 13:06:46 - 20.53
2023-03-13 11:59:46 - 18.33	2023-03-13 12:33:46 - 18.19	2023-03-13 13:07:46 - 20.49
2023-03-13 12:00:46 - 18.19	2023-03-13 12:34:46 - 18.19	2023-03-13 13:08:46 - 20.56
2023-03-13 12:01:46 - 18.31	2023-03-13 12:35:46 - 18.25	2023-03-13 13:09:46 - 20.49
2023-03-13 12:02:46 - 18.25	2023-03-13 12:36:46 - 18.23	2023-03-13 13:10:46 - 20.57
2023-03-13 12:03:46 - 18.32	2023-03-13 12:37:46 - 18.32	2023-03-13 13:11:46 - 20.56
2023-03-13 12:04:46 - 18.28	2023-03-13 12:38:46 - 18.2	2023-03-13 13:12:46 - 20.58
2023-03-13 12:05:46 - 18.22	2023-03-13 12:39:46 - 18.16	2023-03-13 13:13:46 - 20.56
2023-03-13 12:06:46 - 18.22	2023-03-13 12:40:46 - 18.28	2023-03-13 13:14:46 - 20.46
2023-03-13 12:07:46 - 18.37	2023-03-13 12:41:46 - 18.18	2023-03-13 13:15:46 - 20.58
2023-03-13 12:08:46 - 18.25	2023-03-13 12:42:46 - 18.3	2023-03-13 13:16:46 - 20.46
2023-03-13 12:09:46 - 18.31	2023-03-13 12:43:46 - 18.28	2023-03-13 13:17:46 - 20.52
2023-03-13 12:10:46 - 18.19	2023-03-13 12:44:46 - 18.22	2023-03-13 13:18:46 - 20.51
2023-03-13 12:11:46 - 18.23	2023-03-13 12:45:46 - 18.27	2023-03-13 13:19:46 - 20.54
2023-03-13 12:12:46 - 18.29	2023-03-13 12:46:46 - 18.29	2023-03-13 13:20:46 - 20.54
2023-03-13 12:13:46 - 18.32	2023-03-13 12:47:46 - 18.21	2023-03-13 13:21:46 - 20.52
2023-03-13 12:14:46 - 18.22	2023-03-13 12:48:46 - 18.17	2023-03-13 13:22:46 - 20.42
2023-03-13 12:15:46 - 18.35	2023-03-13 12:49:46 - 18.25	2023-03-13 13:23:46 - 20.44
2023-03-13 12:16:46 - 18.21	2023-03-13 12:50:46 - 18.34	2023-03-13 13:24:46 - 20.36
2023-03-13 12:17:46 - 18.21	2023-03-13 12:51:46 - 18.19	2023-03-13 13:25:46 - 20.52
2023-03-13 12:18:46 - 18.2	2023-03-13 12:52:46 - 18.24	2023-03-13 13:26:46 - 20.52
2023-03-13 12:19:46 - 18.22	2023-03-13 12:53:46 - 18.28	2023-03-13 13:27:46 - 20.5
2023-03-13 12:20:46 - 18.25	2023-03-13 12:54:46 - 18.25	2023-03-13 13:28:46 - 20.52
2023-03-13 12:21:46 - 18.36	2023-03-13 12:55:46 - 18.27	2023-03-13 13:29:46 - 20.52
2023-03-13 12:22:46 - 18.18	2023-03-13 12:56:46 - 18.22	2023-03-13 13:30:46 - 20.55
2023-03-13 12:23:46 - 18.24	2023-03-13 12:57:46 - 18.28	2023-03-13 13:31:46 - 20.53
2023-03-13 12:24:46 - 18.21	2023-03-13 12:58:46 - 18.3	2023-03-13 13:32:46 - 20.55
2023-03-13 12:25:46 - 18.27	2023-03-13 12:59:46 - 17.43	2023-03-13 13:33:46 - 20.52
2023-03-13 12:26:46 - 18.29	2023-03-13 13:00:46 - 20.48	2023-03-13 13:34:46 - 20.5
2023-03-13 12:27:46 - 18.25	2023-03-13 13:01:46 - 20.51	2023-03-13 13:35:46 - 20.49

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 13:36:46 - 20.53	2023-03-13 14:10:46 - 16.25	2023-03-13 14:44:46 - 16.25
2023-03-13 13:37:46 - 20.52	2023-03-13 14:11:46 - 16.26	2023-03-13 14:45:46 - 16.28
2023-03-13 13:38:46 - 20.5	2023-03-13 14:12:46 - 16.34	2023-03-13 14:46:46 - 16.17
2023-03-13 13:39:46 - 20.5	2023-03-13 14:13:46 - 16.25	2023-03-13 14:47:46 - 16.21
2023-03-13 13:40:46 - 20.5	2023-03-13 14:14:46 - 16.2	2023-03-13 14:48:46 - 16.29
2023-03-13 13:41:46 - 20.51	2023-03-13 14:15:46 - 16.22	2023-03-13 14:49:46 - 16.3
2023-03-13 13:42:46 - 20.56	2023-03-13 14:16:46 - 16.24	2023-03-13 14:50:46 - 16.24
2023-03-13 13:43:46 - 20.51	2023-03-13 14:17:46 - 16.26	2023-03-13 14:51:46 - 16.19
2023-03-13 13:44:46 - 20.54	2023-03-13 14:18:46 - 16.24	2023-03-13 14:52:46 - 16.39
2023-03-13 13:45:46 - 20.46	2023-03-13 14:19:46 - 16.25	2023-03-13 14:53:46 - 16.36
2023-03-13 13:46:46 - 20.51	2023-03-13 14:20:46 - 16.3	2023-03-13 14:54:46 - 16.34
2023-03-13 13:47:46 - 20.53	2023-03-13 14:21:46 - 16.32	2023-03-13 14:55:46 - 16.31
2023-03-13 13:48:46 - 20.55	2023-03-13 14:22:46 - 16.27	2023-03-13 14:56:46 - 16.27
2023-03-13 13:49:46 - 20.49	2023-03-13 14:23:46 - 16.26	2023-03-13 14:57:46 - 16.31
2023-03-13 13:50:46 - 20.46	2023-03-13 14:24:46 - 16.2	2023-03-13 14:58:46 - 16.26
2023-03-13 13:51:46 - 20.52	2023-03-13 14:25:46 - 16.13	2023-03-13 14:59:46 - 15.87
2023-03-13 13:52:46 - 20.5	2023-03-13 14:26:46 - 16.25	2023-03-13 15:00:46 - 17.19
2023-03-13 13:53:46 - 20.49	2023-03-13 14:27:46 - 16.32	2023-03-13 15:01:46 - 17.23
2023-03-13 13:54:46 - 20.33	2023-03-13 14:28:46 - 16.26	2023-03-13 15:02:46 - 17.22
2023-03-13 13:55:46 - 20.46	2023-03-13 14:29:46 - 16.12	2023-03-13 15:03:46 - 17.16
2023-03-13 13:56:46 - 20.51	2023-03-13 14:30:46 - 16.31	2023-03-13 15:04:46 - 17.26
2023-03-13 13:57:46 - 20.48	2023-03-13 14:31:46 - 16.16	2023-03-13 15:05:46 - 17.14
2023-03-13 13:58:46 - 20.47	2023-03-13 14:32:46 - 16.3	2023-03-13 15:06:46 - 17.27
2023-03-13 13:59:46 - 20.38	2023-03-13 14:33:46 - 16.25	2023-03-13 15:07:46 - 17.19
2023-03-13 14:00:46 - 16.3	2023-03-13 14:34:46 - 16.29	2023-03-13 15:08:46 - 17.23
2023-03-13 14:01:46 - 16.26	2023-03-13 14:35:46 - 16.25	2023-03-13 15:09:46 - 17.17
2023-03-13 14:02:46 - 16.24	2023-03-13 14:36:46 - 16.28	2023-03-13 15:10:46 - 17.18
2023-03-13 14:03:46 - 16.17	2023-03-13 14:37:46 - 16.29	2023-03-13 15:11:46 - 17.24
2023-03-13 14:04:46 - 16.29	2023-03-13 14:38:46 - 16.22	2023-03-13 15:12:46 - 17.19
2023-03-13 14:05:46 - 16.24	2023-03-13 14:39:46 - 16.28	2023-03-13 15:13:46 - 17.19
2023-03-13 14:06:46 - 16.45	2023-03-13 14:40:46 - 16.23	2023-03-13 15:14:46 - 17.27
2023-03-13 14:07:46 - 16.26	2023-03-13 14:41:46 - 16.4	2023-03-13 15:15:46 - 17.23
2023-03-13 14:08:46 - 16.28	2023-03-13 14:42:46 - 16.29	2023-03-13 15:16:46 - 17.19
2023-03-13 14:09:46 - 16.26	2023-03-13 14:43:46 - 16.29	2023-03-13 15:17:46 - 17.19

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 15:18:46 - 17.12	2023-03-13 15:52:46 - 17.22	2023-03-13 16:26:46 - 17.37
2023-03-13 15:19:46 - 17.13	2023-03-13 15:53:46 - 17.47	2023-03-13 16:27:46 - 17.46
2023-03-13 15:20:46 - 17.23	2023-03-13 15:54:46 - 17.14	2023-03-13 16:28:46 - 17.43
2023-03-13 15:21:46 - 17.22	2023-03-13 15:55:46 - 17.22	2023-03-13 16:29:46 - 17.41
2023-03-13 15:22:46 - 17.13	2023-03-13 15:56:46 - 17.03	2023-03-13 16:30:46 - 17.31
2023-03-13 15:23:46 - 17.22	2023-03-13 15:57:46 - 17.03	2023-03-13 16:31:46 - 17.34
2023-03-13 15:24:46 - 17.18	2023-03-13 15:58:46 - 17.27	2023-03-13 16:32:46 - 17.55
2023-03-13 15:25:46 - 17.21	2023-03-13 15:59:46 - 17.25	2023-03-13 16:33:46 - 17.24
2023-03-13 15:26:46 - 17.23	2023-03-13 16:00:46 - 17.41	2023-03-13 16:34:46 - 17.39
2023-03-13 15:27:46 - 17.2	2023-03-13 16:01:46 - 17.39	2023-03-13 16:35:46 - 17.34
2023-03-13 15:28:46 - 17.24	2023-03-13 16:02:46 - 17.42	2023-03-13 16:36:46 - 17.39
2023-03-13 15:29:46 - 17.09	2023-03-13 16:03:46 - 17.27	2023-03-13 16:37:46 - 17.42
2023-03-13 15:30:46 - 17.18	2023-03-13 16:04:46 - 17.4	2023-03-13 16:38:46 - 17.36
2023-03-13 15:31:46 - 17.09	2023-03-13 16:05:46 - 17.42	2023-03-13 16:39:46 - 17.35
2023-03-13 15:32:46 - 17.18	2023-03-13 16:06:46 - 17.34	2023-03-13 16:40:46 - 17.26
2023-03-13 15:33:46 - 17.24	2023-03-13 16:07:46 - 17.44	2023-03-13 16:41:46 - 17.48
2023-03-13 15:34:46 - 17.17	2023-03-13 16:08:46 - 17.43	2023-03-13 16:42:46 - 17.45
2023-03-13 15:35:46 - 17.24	2023-03-13 16:09:46 - 17.43	2023-03-13 16:43:46 - 17.43
2023-03-13 15:36:46 - 17.21	2023-03-13 16:10:46 - 17.44	2023-03-13 16:44:46 - 17.31
2023-03-13 15:37:46 - 17.27	2023-03-13 16:11:46 - 17.42	2023-03-13 16:45:46 - 17.39
2023-03-13 15:38:46 - 17.22	2023-03-13 16:12:46 - 17.3	2023-03-13 16:46:46 - 17.41
2023-03-13 15:39:46 - 17.2	2023-03-13 16:13:46 - 17.43	2023-03-13 16:47:46 - 17.51
2023-03-13 15:40:46 - 17.19	2023-03-13 16:14:46 - 17.45	2023-03-13 16:48:46 - 17.31
2023-03-13 15:41:46 - 17.13	2023-03-13 16:15:46 - 17.42	2023-03-13 16:49:46 - 17.47
2023-03-13 15:42:46 - 17.31	2023-03-13 16:16:46 - 17.39	2023-03-13 16:50:46 - 17.44
2023-03-13 15:43:46 - 17.22	2023-03-13 16:17:46 - 17.55	2023-03-13 16:51:46 - 17.42
2023-03-13 15:44:46 - 17.26	2023-03-13 16:18:46 - 17.3	2023-03-13 16:52:46 - 17.38
2023-03-13 15:45:46 - 17.23	2023-03-13 16:19:46 - 17.38	2023-03-13 16:53:46 - 17.46
2023-03-13 15:46:46 - 17.12	2023-03-13 16:20:46 - 17.38	2023-03-13 16:54:46 - 17.43
2023-03-13 15:47:46 - 17.13	2023-03-13 16:21:46 - 17.46	2023-03-13 16:55:46 - 17.43
2023-03-13 15:48:46 - 17.22	2023-03-13 16:22:46 - 17.41	2023-03-13 16:56:46 - 17.43
2023-03-13 15:49:46 - 17.23	2023-03-13 16:23:46 - 17.38	2023-03-13 16:57:46 - 17.26
2023-03-13 15:50:46 - 17.22	2023-03-13 16:24:46 - 17.31	2023-03-13 16:58:46 - 17.4
2023-03-13 15:51:46 - 17.17	2023-03-13 16:25:46 - 17.43	2023-03-13 16:59:46 - 18.14

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 17:00:46 - 21.38	2023-03-13 17:34:46 - 21.39	2023-03-13 18:08:46 - 19.01
2023-03-13 17:01:46 - 21.3	2023-03-13 17:35:46 - 21.34	2023-03-13 18:09:46 - 19.16
2023-03-13 17:02:46 - 21.34	2023-03-13 17:36:46 - 21.29	2023-03-13 18:10:46 - 19.1
2023-03-13 17:03:46 - 21.52	2023-03-13 17:37:46 - 21.39	2023-03-13 18:11:46 - 19.11
2023-03-13 17:04:46 - 21.38	2023-03-13 17:38:46 - 21.36	2023-03-13 18:12:46 - 19.03
2023-03-13 17:05:46 - 21.53	2023-03-13 17:39:46 - 21.4	2023-03-13 18:13:46 - 19.06
2023-03-13 17:06:46 - 21.41	2023-03-13 17:40:46 - 21.35	2023-03-13 18:14:46 - 19.15
2023-03-13 17:07:46 - 21.43	2023-03-13 17:41:46 - 21.35	2023-03-13 18:15:46 - 19.05
2023-03-13 17:08:46 - 21.25	2023-03-13 17:42:46 - 21.35	2023-03-13 18:16:46 - 19.21
2023-03-13 17:09:46 - 21.36	2023-03-13 17:43:46 - 21.46	2023-03-13 18:17:46 - 19.09
2023-03-13 17:10:46 - 21.36	2023-03-13 17:44:46 - 21.45	2023-03-13 18:18:46 - 19.06
2023-03-13 17:11:46 - 21.33	2023-03-13 17:45:46 - 21.29	2023-03-13 18:19:46 - 18.96
2023-03-13 17:12:46 - 21.39	2023-03-13 17:46:46 - 21.38	2023-03-13 18:20:46 - 19.09
2023-03-13 17:13:46 - 21.37	2023-03-13 17:47:46 - 21.47	2023-03-13 18:21:46 - 19.22
2023-03-13 17:14:46 - 21.36	2023-03-13 17:48:46 - 21.33	2023-03-13 18:22:46 - 19.08
2023-03-13 17:15:46 - 21.33	2023-03-13 17:49:46 - 21.4	2023-03-13 18:23:46 - 19.12
2023-03-13 17:16:46 - 21.37	2023-03-13 17:50:46 - 21.33	2023-03-13 18:24:46 - 19.05
2023-03-13 17:17:46 - 21.37	2023-03-13 17:51:46 - 21.39	2023-03-13 18:25:46 - 19.01
2023-03-13 17:18:46 - 21.33	2023-03-13 17:52:46 - 21.4	2023-03-13 18:26:46 - 19.04
2023-03-13 17:19:46 - 21.43	2023-03-13 17:53:46 - 21.35	2023-03-13 18:27:46 - 19.13
2023-03-13 17:20:46 - 21.36	2023-03-13 17:54:46 - 21.35	2023-03-13 18:28:46 - 19.19
2023-03-13 17:21:46 - 21.27	2023-03-13 17:55:46 - 21.35	2023-03-13 18:29:46 - 19.1
2023-03-13 17:22:46 - 21.37	2023-03-13 17:56:46 - 21.39	2023-03-13 18:30:46 - 19.06
2023-03-13 17:23:46 - 21.35	2023-03-13 17:57:46 - 21.4	2023-03-13 18:31:46 - 19.06
2023-03-13 17:24:46 - 21.31	2023-03-13 17:58:46 - 21.32	2023-03-13 18:32:46 - 19.1
2023-03-13 17:25:46 - 21.37	2023-03-13 17:59:46 - 21.23	2023-03-13 18:33:46 - 19.06
2023-03-13 17:26:46 - 21.39	2023-03-13 18:00:46 - 19.1	2023-03-13 18:34:46 - 19.11
2023-03-13 17:27:46 - 21.36	2023-03-13 18:01:46 - 19.1	2023-03-13 18:35:46 - 19.07
2023-03-13 17:28:46 - 21.36	2023-03-13 18:02:46 - 19.15	2023-03-13 18:36:46 - 19.09
2023-03-13 17:29:46 - 21.38	2023-03-13 18:03:46 - 19.06	2023-03-13 18:37:46 - 18.96
2023-03-13 17:30:46 - 21.47	2023-03-13 18:04:46 - 19.02	2023-03-13 18:38:46 - 18.94
2023-03-13 17:31:46 - 21.37	2023-03-13 18:05:46 - 19.05	2023-03-13 18:39:46 - 19.1
2023-03-13 17:32:46 - 21.44	2023-03-13 18:06:46 - 19.0	2023-03-13 18:40:46 - 19.0
2023-03-13 17:33:46 - 21.37	2023-03-13 18:07:46 - 19.04	2023-03-13 18:41:46 - 18.88

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 18:42:46 - 19.09	2023-03-13 19:16:46 - 21.79	2023-03-13 19:50:46 - 21.79
2023-03-13 18:43:46 - 19.11	2023-03-13 19:17:46 - 21.76	2023-03-13 19:51:46 - 21.77
2023-03-13 18:44:46 - 19.13	2023-03-13 19:18:46 - 21.75	2023-03-13 19:52:46 - 21.8
2023-03-13 18:45:46 - 19.03	2023-03-13 19:19:46 - 21.84	2023-03-13 19:53:46 - 21.66
2023-03-13 18:46:46 - 19.07	2023-03-13 19:20:46 - 21.78	2023-03-13 19:54:46 - 21.76
2023-03-13 18:47:46 - 19.1	2023-03-13 19:21:46 - 21.81	2023-03-13 19:55:46 - 21.78
2023-03-13 18:48:46 - 19.14	2023-03-13 19:22:46 - 21.79	2023-03-13 19:56:46 - 21.62
2023-03-13 18:49:46 - 19.1	2023-03-13 19:23:46 - 21.7	2023-03-13 19:57:46 - 21.75
2023-03-13 18:50:46 - 19.12	2023-03-13 19:24:46 - 21.78	2023-03-13 19:58:46 - 21.73
2023-03-13 18:51:46 - 19.09	2023-03-13 19:25:46 - 21.75	2023-03-13 19:59:46 - 22.31
2023-03-13 18:52:46 - 19.08	2023-03-13 19:26:46 - 21.78	2023-03-13 20:00:46 - 21.57
2023-03-13 18:53:46 - 19.09	2023-03-13 19:27:46 - 21.65	2023-03-13 20:01:46 - 21.42
2023-03-13 18:54:46 - 19.03	2023-03-13 19:28:46 - 21.77	2023-03-13 20:02:46 - 21.47
2023-03-13 18:55:46 - 19.14	2023-03-13 19:29:46 - 21.55	2023-03-13 20:03:46 - 21.58
2023-03-13 18:56:46 - 19.06	2023-03-13 19:30:46 - 21.8	2023-03-13 20:04:46 - 21.58
2023-03-13 18:57:46 - 19.02	2023-03-13 19:31:46 - 21.77	2023-03-13 20:05:46 - 21.59
2023-03-13 18:58:46 - 19.07	2023-03-13 19:32:46 - 21.74	2023-03-13 20:06:46 - 21.59
2023-03-13 18:59:46 - 18.77	2023-03-13 19:33:46 - 21.78	2023-03-13 20:07:46 - 21.56
2023-03-13 19:00:46 - 21.82	2023-03-13 19:34:46 - 21.85	2023-03-13 20:08:46 - 21.54
2023-03-13 19:01:46 - 21.8	2023-03-13 19:35:46 - 21.8	2023-03-13 20:09:46 - 21.55
2023-03-13 19:02:46 - 21.72	2023-03-13 19:36:46 - 21.78	2023-03-13 20:10:46 - 21.61
2023-03-13 19:03:46 - 21.82	2023-03-13 19:37:46 - 21.84	2023-03-13 20:11:46 - 21.68
2023-03-13 19:04:46 - 21.76	2023-03-13 19:38:46 - 21.76	2023-03-13 20:12:46 - 21.55
2023-03-13 19:05:46 - 21.81	2023-03-13 19:39:46 - 21.77	2023-03-13 20:13:46 - 21.51
2023-03-13 19:06:46 - 21.71	2023-03-13 19:40:46 - 21.84	2023-03-13 20:14:46 - 21.51
2023-03-13 19:07:46 - 21.8	2023-03-13 19:41:46 - 21.76	2023-03-13 20:15:46 - 21.53
2023-03-13 19:08:46 - 21.83	2023-03-13 19:42:46 - 21.65	2023-03-13 20:16:46 - 21.46
2023-03-13 19:09:46 - 21.8	2023-03-13 19:43:46 - 21.82	2023-03-13 20:17:46 - 21.48
2023-03-13 19:10:46 - 21.83	2023-03-13 19:44:46 - 21.81	2023-03-13 20:18:46 - 21.59
2023-03-13 19:11:46 - 21.81	2023-03-13 19:45:46 - 21.77	2023-03-13 20:19:46 - 21.47
2023-03-13 19:12:46 - 21.82	2023-03-13 19:46:46 - 21.78	2023-03-13 20:20:46 - 21.5
2023-03-13 19:13:46 - 21.72	2023-03-13 19:47:46 - 21.84	2023-03-13 20:21:46 - 21.44
2023-03-13 19:14:46 - 21.8	2023-03-13 19:48:46 - 21.84	2023-03-13 20:22:46 - 21.52
2023-03-13 19:15:46 - 21.72	2023-03-13 19:49:46 - 21.77	2023-03-13 20:23:46 - 21.51

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 20:24:46 - 21.53	2023-03-13 20:58:46 - 21.56	2023-03-13 21:32:46 - 21.24
2023-03-13 20:25:46 - 21.54	2023-03-13 20:59:46 - 21.38	2023-03-13 21:33:46 - 21.18
2023-03-13 20:26:46 - 21.61	2023-03-13 21:00:46 - 21.25	2023-03-13 21:34:46 - 21.34
2023-03-13 20:27:46 - 21.61	2023-03-13 21:01:46 - 21.27	2023-03-13 21:35:46 - 21.31
2023-03-13 20:28:46 - 21.49	2023-03-13 21:02:46 - 21.3	2023-03-13 21:36:46 - 21.34
2023-03-13 20:29:46 - 21.58	2023-03-13 21:03:46 - 21.24	2023-03-13 21:37:46 - 21.34
2023-03-13 20:30:46 - 21.61	2023-03-13 21:04:46 - 21.28	2023-03-13 21:38:46 - 21.19
2023-03-13 20:31:46 - 21.63	2023-03-13 21:05:46 - 21.24	2023-03-13 21:39:46 - 21.27
2023-03-13 20:32:46 - 21.55	2023-03-13 21:06:46 - 21.37	2023-03-13 21:40:46 - 21.28
2023-03-13 20:33:46 - 21.54	2023-03-13 21:07:46 - 21.26	2023-03-13 21:41:46 - 21.39
2023-03-13 20:34:46 - 21.58	2023-03-13 21:08:46 - 21.23	2023-03-13 21:42:46 - 21.35
2023-03-13 20:35:46 - 21.57	2023-03-13 21:09:46 - 21.31	2023-03-13 21:43:46 - 21.27
2023-03-13 20:36:46 - 21.49	2023-03-13 21:10:46 - 21.29	2023-03-13 21:44:46 - 21.27
2023-03-13 20:37:46 - 21.51	2023-03-13 21:11:46 - 21.29	2023-03-13 21:45:46 - 21.27
2023-03-13 20:38:46 - 21.58	2023-03-13 21:12:46 - 21.32	2023-03-13 21:46:46 - 21.32
2023-03-13 20:39:46 - 21.55	2023-03-13 21:13:46 - 21.27	2023-03-13 21:47:46 - 21.39
2023-03-13 20:40:46 - 21.57	2023-03-13 21:14:46 - 21.29	2023-03-13 21:48:46 - 21.09
2023-03-13 20:41:46 - 21.61	2023-03-13 21:15:46 - 21.44	2023-03-13 21:49:46 - 21.32
2023-03-13 20:42:46 - 21.61	2023-03-13 21:16:46 - 21.25	2023-03-13 21:50:46 - 21.2
2023-03-13 20:43:46 - 21.63	2023-03-13 21:17:46 - 21.16	2023-03-13 21:51:46 - 21.3
2023-03-13 20:44:46 - 21.54	2023-03-13 21:18:46 - 21.26	2023-03-13 21:52:46 - 21.18
2023-03-13 20:45:46 - 21.55	2023-03-13 21:19:46 - 21.15	2023-03-13 21:53:46 - 21.31
2023-03-13 20:46:46 - 21.54	2023-03-13 21:20:46 - 21.07	2023-03-13 21:54:46 - 21.27
2023-03-13 20:47:46 - 21.49	2023-03-13 21:21:46 - 21.15	2023-03-13 21:55:46 - 21.19
2023-03-13 20:48:46 - 21.56	2023-03-13 21:22:46 - 21.25	2023-03-13 21:56:46 - 21.18
2023-03-13 20:49:46 - 21.56	2023-03-13 21:23:46 - 21.26	2023-03-13 21:57:46 - 21.31
2023-03-13 20:50:46 - 21.66	2023-03-13 21:24:46 - 21.32	2023-03-13 21:58:46 - 21.29
2023-03-13 20:51:46 - 21.59	2023-03-13 21:25:46 - 21.28	2023-03-13 21:59:46 - 21.63
2023-03-13 20:52:46 - 21.53	2023-03-13 21:26:46 - 21.35	2023-03-13 22:00:46 - 20.98
2023-03-13 20:53:46 - 21.45	2023-03-13 21:27:46 - 21.41	2023-03-13 22:01:46 - 21.01
2023-03-13 20:54:46 - 21.59	2023-03-13 21:28:46 - 21.39	2023-03-13 22:02:46 - 21.02
2023-03-13 20:55:46 - 21.64	2023-03-13 21:29:46 - 21.29	2023-03-13 22:03:46 - 20.99
2023-03-13 20:56:46 - 21.53	2023-03-13 21:30:46 - 21.19	2023-03-13 22:04:46 - 21.0
2023-03-13 20:57:46 - 21.65	2023-03-13 21:31:46 - 21.31	2023-03-13 22:05:46 - 20.98

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 22:06:46 - 21.0	2023-03-13 22:40:46 - 21.07	2023-03-13 23:14:46 - 21.68
2023-03-13 22:07:46 - 21.02	2023-03-13 22:41:46 - 21.04	2023-03-13 23:15:46 - 21.67
2023-03-13 22:08:46 - 21.04	2023-03-13 22:42:46 - 21.08	2023-03-13 23:16:46 - 21.64
2023-03-13 22:09:46 - 21.03	2023-03-13 22:43:46 - 20.93	2023-03-13 23:17:46 - 21.75
2023-03-13 22:10:46 - 20.97	2023-03-13 22:44:46 - 21.15	2023-03-13 23:18:46 - 21.65
2023-03-13 22:11:46 - 20.98	2023-03-13 22:45:46 - 20.99	2023-03-13 23:19:46 - 21.65
2023-03-13 22:12:46 - 20.98	2023-03-13 22:46:46 - 20.98	2023-03-13 23:20:46 - 21.66
2023-03-13 22:13:46 - 20.92	2023-03-13 22:47:46 - 21.09	2023-03-13 23:21:46 - 21.6
2023-03-13 22:14:46 - 20.99	2023-03-13 22:48:46 - 21.0	2023-03-13 23:22:46 - 21.52
2023-03-13 22:15:46 - 20.98	2023-03-13 22:49:46 - 20.89	2023-03-13 23:23:46 - 21.64
2023-03-13 22:16:46 - 20.95	2023-03-13 22:50:46 - 20.97	2023-03-13 23:24:46 - 21.65
2023-03-13 22:17:46 - 21.01	2023-03-13 22:51:46 - 21.0	2023-03-13 23:25:46 - 21.65
2023-03-13 22:18:46 - 20.92	2023-03-13 22:52:46 - 20.91	2023-03-13 23:26:46 - 21.7
2023-03-13 22:19:46 - 20.87	2023-03-13 22:53:46 - 20.89	2023-03-13 23:27:46 - 21.67
2023-03-13 22:20:46 - 21.22	2023-03-13 22:54:46 - 20.97	2023-03-13 23:28:46 - 21.57
2023-03-13 22:21:46 - 21.02	2023-03-13 22:55:46 - 20.92	2023-03-13 23:29:46 - 21.58
2023-03-13 22:22:46 - 20.99	2023-03-13 22:56:46 - 20.88	2023-03-13 23:30:46 - 21.78
2023-03-13 22:23:46 - 20.98	2023-03-13 22:57:46 - 21.08	2023-03-13 23:31:46 - 21.59
2023-03-13 22:24:46 - 20.97	2023-03-13 22:58:46 - 21.01	2023-03-13 23:32:46 - 21.65
2023-03-13 22:25:46 - 20.92	2023-03-13 22:59:46 - 20.73	2023-03-13 23:33:46 - 21.63
2023-03-13 22:26:46 - 20.94	2023-03-13 23:00:46 - 21.65	2023-03-13 23:34:46 - 21.66
2023-03-13 22:27:46 - 20.96	2023-03-13 23:01:46 - 21.64	2023-03-13 23:35:46 - 21.66
2023-03-13 22:28:46 - 20.96	2023-03-13 23:02:46 - 21.69	2023-03-13 23:36:46 - 21.72
2023-03-13 22:29:46 - 20.95	2023-03-13 23:03:46 - 21.62	2023-03-13 23:37:46 - 21.59
2023-03-13 22:30:46 - 20.94	2023-03-13 23:04:46 - 21.65	2023-03-13 23:38:46 - 21.67
2023-03-13 22:31:46 - 21.03	2023-03-13 23:05:46 - 21.62	2023-03-13 23:39:46 - 21.72
2023-03-13 22:32:46 - 20.99	2023-03-13 23:06:46 - 21.64	2023-03-13 23:40:46 - 21.66
2023-03-13 22:33:46 - 20.88	2023-03-13 23:07:46 - 21.63	2023-03-13 23:41:46 - 21.66
2023-03-13 22:34:46 - 20.95	2023-03-13 23:08:46 - 21.71	2023-03-13 23:42:46 - 21.71
2023-03-13 22:35:46 - 21.06	2023-03-13 23:09:46 - 21.73	2023-03-13 23:43:46 - 21.63
2023-03-13 22:36:46 - 20.96	2023-03-13 23:10:46 - 21.68	2023-03-13 23:44:46 - 21.67
2023-03-13 22:37:46 - 20.93	2023-03-13 23:11:46 - 21.67	2023-03-13 23:45:46 - 21.67
2023-03-13 22:38:46 - 20.98	2023-03-13 23:12:46 - 21.58	2023-03-13 23:46:46 - 21.65
2023-03-13 22:39:46 - 20.95	2023-03-13 23:13:46 - 21.7	2023-03-13 23:47:46 - 21.63

Horário/Leitura

2023-03-13 23:48:46 - 21.64

2023-03-13 23:49:46 - 21.59

2023-03-13 23:50:46 - 21.46

2023-03-13 23:51:46 - 21.65

2023-03-13 23:52:46 - 21.62

2023-03-13 23:53:46 - 21.67

2023-03-13 23:54:46 - 21.73

2023-03-13 23:55:46 - 21.63

2023-03-13 23:56:46 - 21.57

2023-03-13 23:57:46 - 21.65

2023-03-13 23:58:46 - 21.67

2023-03-13 23:59:46 - 21.68

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 00:00:24 - 26.51	2023-03-13 00:34:24 - 26.39	2023-03-13 01:08:24 - 26.26
2023-03-13 00:01:24 - 26.42	2023-03-13 00:35:24 - 26.53	2023-03-13 01:09:24 - 26.39
2023-03-13 00:02:24 - 26.52	2023-03-13 00:36:24 - 26.55	2023-03-13 01:10:24 - 26.31
2023-03-13 00:03:24 - 26.55	2023-03-13 00:37:24 - 26.43	2023-03-13 01:11:24 - 26.25
2023-03-13 00:04:24 - 26.5	2023-03-13 00:38:24 - 26.5	2023-03-13 01:12:24 - 26.39
2023-03-13 00:05:24 - 26.5	2023-03-13 00:39:24 - 26.51	2023-03-13 01:13:24 - 26.22
2023-03-13 00:06:24 - 26.45	2023-03-13 00:40:24 - 26.46	2023-03-13 01:14:24 - 26.27
2023-03-13 00:07:24 - 26.49	2023-03-13 00:41:24 - 26.47	2023-03-13 01:15:24 - 26.31
2023-03-13 00:08:24 - 26.47	2023-03-13 00:42:24 - 26.39	2023-03-13 01:16:24 - 26.31
2023-03-13 00:09:24 - 26.48	2023-03-13 00:43:24 - 26.37	2023-03-13 01:17:24 - 26.26
2023-03-13 00:10:24 - 26.48	2023-03-13 00:44:24 - 26.51	2023-03-13 01:18:24 - 26.28
2023-03-13 00:11:24 - 26.47	2023-03-13 00:45:24 - 26.35	2023-03-13 01:19:24 - 26.27
2023-03-13 00:12:24 - 26.55	2023-03-13 00:46:24 - 26.44	2023-03-13 01:20:24 - 26.39
2023-03-13 00:13:24 - 26.44	2023-03-13 00:47:24 - 26.46	2023-03-13 01:21:24 - 26.26
2023-03-13 00:14:24 - 26.46	2023-03-13 00:48:24 - 26.4	2023-03-13 01:22:24 - 26.29
2023-03-13 00:15:24 - 26.41	2023-03-13 00:49:24 - 26.59	2023-03-13 01:23:24 - 26.4
2023-03-13 00:16:24 - 26.51	2023-03-13 00:50:24 - 26.37	2023-03-13 01:24:24 - 26.23
2023-03-13 00:17:24 - 26.48	2023-03-13 00:51:24 - 26.48	2023-03-13 01:25:24 - 26.28
2023-03-13 00:18:24 - 26.47	2023-03-13 00:52:24 - 26.45	2023-03-13 01:26:24 - 26.33
2023-03-13 00:19:24 - 26.53	2023-03-13 00:53:24 - 26.53	2023-03-13 01:27:24 - 26.25
2023-03-13 00:20:24 - 26.54	2023-03-13 00:54:24 - 26.53	2023-03-13 01:28:24 - 26.36
2023-03-13 00:21:24 - 26.41	2023-03-13 00:55:24 - 26.56	2023-03-13 01:29:24 - 26.32
2023-03-13 00:22:24 - 26.48	2023-03-13 00:56:24 - 26.55	2023-03-13 01:30:24 - 26.24
2023-03-13 00:23:24 - 26.49	2023-03-13 00:57:24 - 26.54	2023-03-13 01:31:24 - 26.42
2023-03-13 00:24:24 - 26.46	2023-03-13 00:58:24 - 26.41	2023-03-13 01:32:24 - 26.2
2023-03-13 00:25:24 - 26.55	2023-03-13 00:59:24 - 26.58	2023-03-13 01:33:24 - 26.15
2023-03-13 00:26:24 - 26.54	2023-03-13 01:00:24 - 26.28	2023-03-13 01:34:24 - 26.37
2023-03-13 00:27:24 - 26.41	2023-03-13 01:01:24 - 26.28	2023-03-13 01:35:24 - 26.28
2023-03-13 00:28:24 - 26.5	2023-03-13 01:02:24 - 26.37	2023-03-13 01:36:24 - 26.25
2023-03-13 00:29:24 - 26.56	2023-03-13 01:03:24 - 26.3	2023-03-13 01:37:24 - 26.4
2023-03-13 00:30:24 - 26.48	2023-03-13 01:04:24 - 26.24	2023-03-13 01:38:24 - 26.19
2023-03-13 00:31:24 - 26.47	2023-03-13 01:05:24 - 26.28	2023-03-13 01:39:24 - 26.29
2023-03-13 00:32:24 - 26.48	2023-03-13 01:06:24 - 26.4	2023-03-13 01:40:24 - 26.31
2023-03-13 00:33:24 - 26.4	2023-03-13 01:07:24 - 26.24	2023-03-13 01:41:24 - 26.31

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 01:42:24 - 26.28	2023-03-13 02:16:24 - 26.22	2023-03-13 02:50:24 - 26.15
2023-03-13 01:43:24 - 26.31	2023-03-13 02:17:24 - 26.14	2023-03-13 02:51:24 - 26.12
2023-03-13 01:44:24 - 26.27	2023-03-13 02:18:24 - 26.21	2023-03-13 02:52:24 - 26.24
2023-03-13 01:45:24 - 26.26	2023-03-13 02:19:24 - 26.21	2023-03-13 02:53:24 - 26.25
2023-03-13 01:46:24 - 26.37	2023-03-13 02:20:24 - 26.13	2023-03-13 02:54:24 - 26.1
2023-03-13 01:47:24 - 26.31	2023-03-13 02:21:24 - 26.05	2023-03-13 02:55:24 - 26.16
2023-03-13 01:48:24 - 26.24	2023-03-13 02:22:24 - 26.18	2023-03-13 02:56:24 - 26.26
2023-03-13 01:49:24 - 26.28	2023-03-13 02:23:24 - 26.17	2023-03-13 02:57:24 - 26.2
2023-03-13 01:50:24 - 26.35	2023-03-13 02:24:24 - 26.19	2023-03-13 02:58:24 - 26.12
2023-03-13 01:51:24 - 26.33	2023-03-13 02:25:24 - 26.16	2023-03-13 02:59:24 - 25.68
2023-03-13 01:52:24 - 26.25	2023-03-13 02:26:24 - 26.18	2023-03-13 03:00:24 - 26.07
2023-03-13 01:53:24 - 26.29	2023-03-13 02:27:24 - 26.1	2023-03-13 03:01:24 - 26.0
2023-03-13 01:54:24 - 26.29	2023-03-13 02:28:24 - 26.25	2023-03-13 03:02:24 - 26.12
2023-03-13 01:55:24 - 26.38	2023-03-13 02:29:24 - 26.15	2023-03-13 03:03:24 - 26.03
2023-03-13 01:56:24 - 26.35	2023-03-13 02:30:24 - 26.15	2023-03-13 03:04:24 - 25.96
2023-03-13 01:57:24 - 26.27	2023-03-13 02:31:24 - 26.19	2023-03-13 03:05:24 - 25.88
2023-03-13 01:58:24 - 26.25	2023-03-13 02:32:24 - 26.18	2023-03-13 03:06:24 - 25.94
2023-03-13 01:59:24 - 25.87	2023-03-13 02:33:24 - 26.39	2023-03-13 03:07:24 - 25.94
2023-03-13 02:00:24 - 26.24	2023-03-13 02:34:24 - 26.3	2023-03-13 03:08:24 - 26.08
2023-03-13 02:01:24 - 26.1	2023-03-13 02:35:24 - 26.12	2023-03-13 03:09:24 - 26.03
2023-03-13 02:02:24 - 26.16	2023-03-13 02:36:24 - 26.19	2023-03-13 03:10:24 - 26.02
2023-03-13 02:03:24 - 26.17	2023-03-13 02:37:24 - 26.17	2023-03-13 03:11:24 - 25.93
2023-03-13 02:04:24 - 26.37	2023-03-13 02:38:24 - 26.17	2023-03-13 03:12:24 - 25.97
2023-03-13 02:05:24 - 26.22	2023-03-13 02:39:24 - 26.22	2023-03-13 03:13:24 - 26.03
2023-03-13 02:06:24 - 26.17	2023-03-13 02:40:24 - 26.13	2023-03-13 03:14:24 - 26.01
2023-03-13 02:07:24 - 26.2	2023-03-13 02:41:24 - 26.19	2023-03-13 03:15:24 - 26.05
2023-03-13 02:08:24 - 26.14	2023-03-13 02:42:24 - 26.18	2023-03-13 03:16:24 - 26.02
2023-03-13 02:09:24 - 26.23	2023-03-13 02:43:24 - 26.07	2023-03-13 03:17:24 - 25.99
2023-03-13 02:10:24 - 26.19	2023-03-13 02:44:24 - 26.39	2023-03-13 03:18:24 - 26.04
2023-03-13 02:11:24 - 26.17	2023-03-13 02:45:24 - 26.17	2023-03-13 03:19:24 - 26.04
2023-03-13 02:12:24 - 26.17	2023-03-13 02:46:24 - 26.19	2023-03-13 03:20:24 - 25.9
2023-03-13 02:13:24 - 26.36	2023-03-13 02:47:24 - 26.13	2023-03-13 03:21:24 - 26.12
2023-03-13 02:14:24 - 26.16	2023-03-13 02:48:24 - 26.16	2023-03-13 03:22:24 - 26.07
2023-03-13 02:15:24 - 26.21	2023-03-13 02:49:24 - 26.23	2023-03-13 03:23:24 - 25.99

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 03:24:24 - 26.02	2023-03-13 03:58:24 - 26.08	2023-03-13 04:32:24 - 25.42
2023-03-13 03:25:24 - 26.02	2023-03-13 03:59:24 - 26.04	2023-03-13 04:33:24 - 25.51
2023-03-13 03:26:24 - 26.0	2023-03-13 04:00:24 - 25.42	2023-03-13 04:34:24 - 25.44
2023-03-13 03:27:24 - 26.03	2023-03-13 04:01:24 - 25.45	2023-03-13 04:35:24 - 25.5
2023-03-13 03:28:24 - 25.97	2023-03-13 04:02:24 - 25.35	2023-03-13 04:36:24 - 25.48
2023-03-13 03:29:24 - 26.01	2023-03-13 04:03:24 - 25.42	2023-03-13 04:37:24 - 25.46
2023-03-13 03:30:24 - 25.97	2023-03-13 04:04:24 - 25.49	2023-03-13 04:38:24 - 25.41
2023-03-13 03:31:24 - 26.11	2023-03-13 04:05:24 - 25.4	2023-03-13 04:39:24 - 25.49
2023-03-13 03:32:24 - 25.95	2023-03-13 04:06:24 - 25.41	2023-03-13 04:40:24 - 25.4
2023-03-13 03:33:24 - 26.04	2023-03-13 04:07:24 - 25.49	2023-03-13 04:41:24 - 25.47
2023-03-13 03:34:24 - 25.91	2023-03-13 04:08:24 - 25.44	2023-03-13 04:42:24 - 25.48
2023-03-13 03:35:24 - 25.98	2023-03-13 04:09:24 - 25.43	2023-03-13 04:43:24 - 25.48
2023-03-13 03:36:24 - 25.99	2023-03-13 04:10:24 - 25.54	2023-03-13 04:44:24 - 25.5
2023-03-13 03:37:24 - 26.03	2023-03-13 04:11:24 - 25.46	2023-03-13 04:45:24 - 25.43
2023-03-13 03:38:24 - 26.07	2023-03-13 04:12:24 - 25.43	2023-03-13 04:46:24 - 25.37
2023-03-13 03:39:24 - 26.1	2023-03-13 04:13:24 - 25.43	2023-03-13 04:47:24 - 25.5
2023-03-13 03:40:24 - 26.09	2023-03-13 04:14:24 - 25.47	2023-03-13 04:48:24 - 25.46
2023-03-13 03:41:24 - 26.01	2023-03-13 04:15:24 - 25.48	2023-03-13 04:49:24 - 25.51
2023-03-13 03:42:24 - 26.04	2023-03-13 04:16:24 - 25.34	2023-03-13 04:50:24 - 25.47
2023-03-13 03:43:24 - 26.1	2023-03-13 04:17:24 - 25.52	2023-03-13 04:51:24 - 25.43
2023-03-13 03:44:24 - 26.01	2023-03-13 04:18:24 - 25.45	2023-03-13 04:52:24 - 25.49
2023-03-13 03:45:24 - 25.99	2023-03-13 04:19:24 - 25.51	2023-03-13 04:53:24 - 25.49
2023-03-13 03:46:24 - 26.2	2023-03-13 04:20:24 - 25.46	2023-03-13 04:54:24 - 25.54
2023-03-13 03:47:24 - 26.04	2023-03-13 04:21:24 - 25.49	2023-03-13 04:55:24 - 25.48
2023-03-13 03:48:24 - 26.01	2023-03-13 04:22:24 - 25.45	2023-03-13 04:56:24 - 25.38
2023-03-13 03:49:24 - 26.02	2023-03-13 04:23:24 - 25.4	2023-03-13 04:57:24 - 25.48
2023-03-13 03:50:24 - 26.05	2023-03-13 04:24:24 - 25.45	2023-03-13 04:58:24 - 25.5
2023-03-13 03:51:24 - 26.05	2023-03-13 04:25:24 - 25.44	2023-03-13 04:59:24 - 24.28
2023-03-13 03:52:24 - 25.96	2023-03-13 04:26:24 - 25.52	2023-03-13 05:00:24 - 22.01
2023-03-13 03:53:24 - 26.02	2023-03-13 04:27:24 - 25.62	2023-03-13 05:01:24 - 22.06
2023-03-13 03:54:24 - 26.0	2023-03-13 04:28:24 - 25.48	2023-03-13 05:02:24 - 22.06
2023-03-13 03:55:24 - 26.03	2023-03-13 04:29:24 - 25.43	2023-03-13 05:03:24 - 22.04
2023-03-13 03:56:24 - 26.02	2023-03-13 04:30:24 - 25.42	2023-03-13 05:04:24 - 22.06
2023-03-13 03:57:24 - 25.98	2023-03-13 04:31:24 - 25.47	2023-03-13 05:05:24 - 22.05

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 05:06:24 - 21.99	2023-03-13 05:40:24 - 22.05	2023-03-13 06:14:24 - 21.8
2023-03-13 05:07:24 - 22.06	2023-03-13 05:41:24 - 22.08	2023-03-13 06:15:24 - 21.8
2023-03-13 05:08:24 - 21.94	2023-03-13 05:42:24 - 21.96	2023-03-13 06:16:24 - 21.8
2023-03-13 05:09:24 - 21.97	2023-03-13 05:43:24 - 22.04	2023-03-13 06:17:24 - 21.6
2023-03-13 05:10:24 - 22.03	2023-03-13 05:44:24 - 22.05	2023-03-13 06:18:24 - 21.78
2023-03-13 05:11:24 - 22.02	2023-03-13 05:45:24 - 22.15	2023-03-13 06:19:24 - 21.78
2023-03-13 05:12:24 - 22.0	2023-03-13 05:46:24 - 21.97	2023-03-13 06:20:24 - 21.74
2023-03-13 05:13:24 - 22.0	2023-03-13 05:47:24 - 21.97	2023-03-13 06:21:24 - 21.84
2023-03-13 05:14:24 - 22.17	2023-03-13 05:48:24 - 22.1	2023-03-13 06:22:24 - 21.74
2023-03-13 05:15:24 - 22.05	2023-03-13 05:49:24 - 21.95	2023-03-13 06:23:24 - 21.82
2023-03-13 05:16:24 - 22.01	2023-03-13 05:50:24 - 22.06	2023-03-13 06:24:24 - 21.8
2023-03-13 05:17:24 - 22.03	2023-03-13 05:51:24 - 22.0	2023-03-13 06:25:24 - 21.79
2023-03-13 05:18:24 - 22.17	2023-03-13 05:52:24 - 22.02	2023-03-13 06:26:24 - 21.81
2023-03-13 05:19:24 - 22.07	2023-03-13 05:53:24 - 22.04	2023-03-13 06:27:24 - 21.79
2023-03-13 05:20:24 - 22.07	2023-03-13 05:54:24 - 22.03	2023-03-13 06:28:24 - 21.74
2023-03-13 05:21:24 - 22.01	2023-03-13 05:55:24 - 22.07	2023-03-13 06:29:24 - 21.67
2023-03-13 05:22:24 - 22.09	2023-03-13 05:56:24 - 22.04	2023-03-13 06:30:24 - 21.81
2023-03-13 05:23:24 - 22.17	2023-03-13 05:57:24 - 22.07	2023-03-13 06:31:24 - 21.74
2023-03-13 05:24:24 - 21.98	2023-03-13 05:58:24 - 22.03	2023-03-13 06:32:24 - 21.72
2023-03-13 05:25:24 - 21.98	2023-03-13 05:59:24 - 21.65	2023-03-13 06:33:24 - 21.8
2023-03-13 05:26:24 - 22.07	2023-03-13 06:00:24 - 21.74	2023-03-13 06:34:24 - 21.69
2023-03-13 05:27:24 - 22.02	2023-03-13 06:01:24 - 21.76	2023-03-13 06:35:24 - 21.74
2023-03-13 05:28:24 - 21.82	2023-03-13 06:02:24 - 21.76	2023-03-13 06:36:24 - 21.81
2023-03-13 05:29:24 - 22.06	2023-03-13 06:03:24 - 21.8	2023-03-13 06:37:24 - 21.75
2023-03-13 05:30:24 - 22.04	2023-03-13 06:04:24 - 21.7	2023-03-13 06:38:24 - 21.75
2023-03-13 05:31:24 - 22.03	2023-03-13 06:05:24 - 21.74	2023-03-13 06:39:24 - 21.76
2023-03-13 05:32:24 - 21.99	2023-03-13 06:06:24 - 21.68	2023-03-13 06:40:24 - 21.7
2023-03-13 05:33:24 - 22.0	2023-03-13 06:07:24 - 21.8	2023-03-13 06:41:24 - 21.79
2023-03-13 05:34:24 - 22.03	2023-03-13 06:08:24 - 21.76	2023-03-13 06:42:24 - 21.78
2023-03-13 05:35:24 - 22.03	2023-03-13 06:09:24 - 21.85	2023-03-13 06:43:24 - 21.76
2023-03-13 05:36:24 - 22.03	2023-03-13 06:10:24 - 21.72	2023-03-13 06:44:24 - 21.81
2023-03-13 05:37:24 - 22.09	2023-03-13 06:11:24 - 21.66	2023-03-13 06:45:24 - 21.77
2023-03-13 05:38:24 - 22.06	2023-03-13 06:12:24 - 21.76	2023-03-13 06:46:24 - 21.77
2023-03-13 05:39:24 - 22.1	2023-03-13 06:13:24 - 21.83	2023-03-13 06:47:24 - 21.76

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 06:48:24 - 21.77	2023-03-13 07:22:24 - 25.44	2023-03-13 07:56:24 - 25.46
2023-03-13 06:49:24 - 21.75	2023-03-13 07:23:24 - 25.38	2023-03-13 07:57:24 - 25.34
2023-03-13 06:50:24 - 21.77	2023-03-13 07:24:24 - 25.44	2023-03-13 07:58:24 - 25.4
2023-03-13 06:51:24 - 21.78	2023-03-13 07:25:24 - 25.44	2023-03-13 07:59:24 - 26.23
2023-03-13 06:52:24 - 21.73	2023-03-13 07:26:24 - 25.56	2023-03-13 08:00:24 - 21.75
2023-03-13 06:53:24 - 21.77	2023-03-13 07:27:24 - 25.42	2023-03-13 08:01:24 - 21.74
2023-03-13 06:54:24 - 21.71	2023-03-13 07:28:24 - 25.47	2023-03-13 08:02:24 - 21.74
2023-03-13 06:55:24 - 21.82	2023-03-13 07:29:24 - 25.56	2023-03-13 08:03:24 - 21.76
2023-03-13 06:56:24 - 21.84	2023-03-13 07:30:24 - 25.3	2023-03-13 08:04:24 - 21.79
2023-03-13 06:57:24 - 21.67	2023-03-13 07:31:24 - 25.52	2023-03-13 08:05:24 - 21.75
2023-03-13 06:58:24 - 21.74	2023-03-13 07:32:24 - 25.59	2023-03-13 08:06:24 - 21.71
2023-03-13 06:59:24 - 21.68	2023-03-13 07:33:24 - 25.44	2023-03-13 08:07:24 - 21.82
2023-03-13 07:00:24 - 25.43	2023-03-13 07:34:24 - 25.45	2023-03-13 08:08:24 - 21.84
2023-03-13 07:01:24 - 25.43	2023-03-13 07:35:24 - 25.28	2023-03-13 08:09:24 - 21.74
2023-03-13 07:02:24 - 25.39	2023-03-13 07:36:24 - 25.31	2023-03-13 08:10:24 - 21.79
2023-03-13 07:03:24 - 25.41	2023-03-13 07:37:24 - 25.4	2023-03-13 08:11:24 - 21.72
2023-03-13 07:04:24 - 25.44	2023-03-13 07:38:24 - 25.43	2023-03-13 08:12:24 - 21.72
2023-03-13 07:05:24 - 25.41	2023-03-13 07:39:24 - 25.45	2023-03-13 08:13:24 - 21.73
2023-03-13 07:06:24 - 25.44	2023-03-13 07:40:24 - 25.42	2023-03-13 08:14:24 - 21.71
2023-03-13 07:07:24 - 25.47	2023-03-13 07:41:24 - 25.4	2023-03-13 08:15:24 - 21.74
2023-03-13 07:08:24 - 25.45	2023-03-13 07:42:24 - 25.35	2023-03-13 08:16:24 - 21.8
2023-03-13 07:09:24 - 25.33	2023-03-13 07:43:24 - 25.35	2023-03-13 08:17:24 - 21.67
2023-03-13 07:10:24 - 25.49	2023-03-13 07:44:24 - 25.43	2023-03-13 08:18:24 - 21.69
2023-03-13 07:11:24 - 25.34	2023-03-13 07:45:24 - 25.39	2023-03-13 08:19:24 - 21.69
2023-03-13 07:12:24 - 25.44	2023-03-13 07:46:24 - 25.33	2023-03-13 08:20:24 - 21.68
2023-03-13 07:13:24 - 25.51	2023-03-13 07:47:24 - 25.36	2023-03-13 08:21:24 - 21.84
2023-03-13 07:14:24 - 25.49	2023-03-13 07:48:24 - 25.43	2023-03-13 08:22:24 - 21.69
2023-03-13 07:15:24 - 25.44	2023-03-13 07:49:24 - 25.4	2023-03-13 08:23:24 - 21.74
2023-03-13 07:16:24 - 25.25	2023-03-13 07:50:24 - 25.48	2023-03-13 08:24:24 - 21.73
2023-03-13 07:17:24 - 25.45	2023-03-13 07:51:24 - 25.42	2023-03-13 08:25:24 - 21.91
2023-03-13 07:18:24 - 25.47	2023-03-13 07:52:24 - 25.45	2023-03-13 08:26:24 - 21.85
2023-03-13 07:19:24 - 25.36	2023-03-13 07:53:24 - 25.39	2023-03-13 08:27:24 - 21.9
2023-03-13 07:20:24 - 25.31	2023-03-13 07:54:24 - 25.27	2023-03-13 08:28:24 - 21.71
2023-03-13 07:21:24 - 25.44	2023-03-13 07:55:24 - 25.45	2023-03-13 08:29:24 - 21.74

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 08:30:24 - 21.68	2023-03-13 09:04:24 - 23.53	2023-03-13 09:38:24 - 23.46
2023-03-13 08:31:24 - 21.65	2023-03-13 09:05:24 - 23.53	2023-03-13 09:39:24 - 23.49
2023-03-13 08:32:24 - 21.71	2023-03-13 09:06:24 - 23.49	2023-03-13 09:40:24 - 23.48
2023-03-13 08:33:24 - 21.8	2023-03-13 09:07:24 - 23.51	2023-03-13 09:41:24 - 23.47
2023-03-13 08:34:24 - 21.73	2023-03-13 09:08:24 - 23.4	2023-03-13 09:42:24 - 23.5
2023-03-13 08:35:24 - 21.74	2023-03-13 09:09:24 - 23.55	2023-03-13 09:43:24 - 23.57
2023-03-13 08:36:24 - 21.85	2023-03-13 09:10:24 - 23.5	2023-03-13 09:44:24 - 23.49
2023-03-13 08:37:24 - 21.8	2023-03-13 09:11:24 - 23.49	2023-03-13 09:45:24 - 23.49
2023-03-13 08:38:24 - 21.72	2023-03-13 09:12:24 - 23.43	2023-03-13 09:46:24 - 23.47
2023-03-13 08:39:24 - 21.79	2023-03-13 09:13:24 - 23.45	2023-03-13 09:47:24 - 23.32
2023-03-13 08:40:24 - 21.73	2023-03-13 09:14:24 - 23.51	2023-03-13 09:48:24 - 23.41
2023-03-13 08:41:24 - 21.67	2023-03-13 09:15:24 - 23.51	2023-03-13 09:49:24 - 23.45
2023-03-13 08:42:24 - 21.75	2023-03-13 09:16:24 - 23.36	2023-03-13 09:50:24 - 23.67
2023-03-13 08:43:24 - 21.7	2023-03-13 09:17:24 - 23.5	2023-03-13 09:51:24 - 23.47
2023-03-13 08:44:24 - 21.75	2023-03-13 09:18:24 - 23.39	2023-03-13 09:52:24 - 23.49
2023-03-13 08:45:24 - 21.73	2023-03-13 09:19:24 - 23.46	2023-03-13 09:53:24 - 23.42
2023-03-13 08:46:24 - 21.58	2023-03-13 09:20:24 - 23.46	2023-03-13 09:54:24 - 23.57
2023-03-13 08:47:24 - 21.69	2023-03-13 09:21:24 - 23.39	2023-03-13 09:55:24 - 23.48
2023-03-13 08:48:24 - 21.78	2023-03-13 09:22:24 - 23.5	2023-03-13 09:56:24 - 23.44
2023-03-13 08:49:24 - 21.77	2023-03-13 09:23:24 - 23.49	2023-03-13 09:57:24 - 23.5
2023-03-13 08:50:24 - 21.7	2023-03-13 09:24:24 - 23.54	2023-03-13 09:58:24 - 23.57
2023-03-13 08:51:24 - 21.74	2023-03-13 09:25:24 - 23.45	2023-03-13 09:59:24 - 23.73
2023-03-13 08:52:24 - 21.87	2023-03-13 09:26:24 - 23.49	2023-03-13 10:00:24 - 21.77
2023-03-13 08:53:24 - 21.72	2023-03-13 09:27:24 - 23.47	2023-03-13 10:01:24 - 21.86
2023-03-13 08:54:24 - 21.83	2023-03-13 09:28:24 - 23.56	2023-03-13 10:02:24 - 21.9
2023-03-13 08:55:24 - 21.73	2023-03-13 09:29:24 - 23.44	2023-03-13 10:03:24 - 21.78
2023-03-13 08:56:24 - 21.81	2023-03-13 09:30:24 - 23.51	2023-03-13 10:04:24 - 21.83
2023-03-13 08:57:24 - 21.73	2023-03-13 09:31:24 - 23.55	2023-03-13 10:05:24 - 21.76
2023-03-13 08:58:24 - 21.73	2023-03-13 09:32:24 - 23.37	2023-03-13 10:06:24 - 21.83
2023-03-13 08:59:24 - 21.25	2023-03-13 09:33:24 - 23.43	2023-03-13 10:07:24 - 21.87
2023-03-13 09:00:24 - 23.54	2023-03-13 09:34:24 - 23.44	2023-03-13 10:08:24 - 21.86
2023-03-13 09:01:24 - 23.49	2023-03-13 09:35:24 - 23.49	2023-03-13 10:09:24 - 21.84
2023-03-13 09:02:24 - 23.47	2023-03-13 09:36:24 - 23.54	2023-03-13 10:10:24 - 21.88
2023-03-13 09:03:24 - 23.64	2023-03-13 09:37:24 - 23.57	2023-03-13 10:11:24 - 21.8

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 10:12:24 - 22.02	2023-03-13 10:46:24 - 21.87	2023-03-13 11:20:24 - 22.06
2023-03-13 10:13:24 - 21.8	2023-03-13 10:47:24 - 21.89	2023-03-13 11:21:24 - 22.14
2023-03-13 10:14:24 - 21.89	2023-03-13 10:48:24 - 21.81	2023-03-13 11:22:24 - 22.16
2023-03-13 10:15:24 - 21.96	2023-03-13 10:49:24 - 21.89	2023-03-13 11:23:24 - 22.04
2023-03-13 10:16:24 - 21.85	2023-03-13 10:50:24 - 21.8	2023-03-13 11:24:24 - 22.05
2023-03-13 10:17:24 - 21.87	2023-03-13 10:51:24 - 21.85	2023-03-13 11:25:24 - 22.14
2023-03-13 10:18:24 - 21.87	2023-03-13 10:52:24 - 21.83	2023-03-13 11:26:24 - 22.06
2023-03-13 10:19:24 - 21.84	2023-03-13 10:53:24 - 21.97	2023-03-13 11:27:24 - 22.1
2023-03-13 10:20:24 - 21.86	2023-03-13 10:54:24 - 21.93	2023-03-13 11:28:24 - 22.07
2023-03-13 10:21:24 - 21.82	2023-03-13 10:55:24 - 21.94	2023-03-13 11:29:24 - 22.12
2023-03-13 10:22:24 - 21.81	2023-03-13 10:56:24 - 21.9	2023-03-13 11:30:24 - 21.98
2023-03-13 10:23:24 - 21.86	2023-03-13 10:57:24 - 21.86	2023-03-13 11:31:24 - 22.18
2023-03-13 10:24:24 - 21.99	2023-03-13 10:58:24 - 21.87	2023-03-13 11:32:24 - 22.04
2023-03-13 10:25:24 - 21.9	2023-03-13 10:59:24 - 21.43	2023-03-13 11:33:24 - 22.13
2023-03-13 10:26:24 - 21.81	2023-03-13 11:00:24 - 22.1	2023-03-13 11:34:24 - 22.17
2023-03-13 10:27:24 - 21.86	2023-03-13 11:01:24 - 22.02	2023-03-13 11:35:24 - 22.03
2023-03-13 10:28:24 - 21.89	2023-03-13 11:02:24 - 21.94	2023-03-13 11:36:24 - 22.09
2023-03-13 10:29:24 - 21.79	2023-03-13 11:03:24 - 22.12	2023-03-13 11:37:24 - 22.03
2023-03-13 10:30:24 - 21.88	2023-03-13 11:04:24 - 22.05	2023-03-13 11:38:24 - 22.06
2023-03-13 10:31:24 - 21.86	2023-03-13 11:05:24 - 22.07	2023-03-13 11:39:24 - 22.08
2023-03-13 10:32:24 - 21.93	2023-03-13 11:06:24 - 22.05	2023-03-13 11:40:24 - 22.09
2023-03-13 10:33:24 - 21.83	2023-03-13 11:07:24 - 22.12	2023-03-13 11:41:24 - 22.1
2023-03-13 10:34:24 - 21.96	2023-03-13 11:08:24 - 22.11	2023-03-13 11:42:24 - 22.1
2023-03-13 10:35:24 - 21.8	2023-03-13 11:09:24 - 22.11	2023-03-13 11:43:24 - 22.06
2023-03-13 10:36:24 - 21.86	2023-03-13 11:10:24 - 21.91	2023-03-13 11:44:24 - 22.21
2023-03-13 10:37:24 - 21.88	2023-03-13 11:11:24 - 22.1	2023-03-13 11:45:24 - 22.1
2023-03-13 10:38:24 - 21.88	2023-03-13 11:12:24 - 22.09	2023-03-13 11:46:24 - 22.09
2023-03-13 10:39:24 - 21.86	2023-03-13 11:13:24 - 22.09	2023-03-13 11:47:24 - 22.1
2023-03-13 10:40:24 - 21.84	2023-03-13 11:14:24 - 22.1	2023-03-13 11:48:24 - 22.14
2023-03-13 10:41:24 - 21.89	2023-03-13 11:15:24 - 22.08	2023-03-13 11:49:24 - 22.12
2023-03-13 10:42:24 - 21.85	2023-03-13 11:16:24 - 22.1	2023-03-13 11:50:24 - 22.08
2023-03-13 10:43:24 - 21.95	2023-03-13 11:17:24 - 22.1	2023-03-13 11:51:24 - 22.12
2023-03-13 10:44:24 - 21.92	2023-03-13 11:18:24 - 22.11	2023-03-13 11:52:24 - 22.09
2023-03-13 10:45:24 - 21.87	2023-03-13 11:19:24 - 22.12	2023-03-13 11:53:24 - 21.94

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 11:54:24 - 22.14	2023-03-13 12:28:24 - 21.47	2023-03-13 13:02:24 - 24.42
2023-03-13 11:55:24 - 22.17	2023-03-13 12:29:24 - 21.51	2023-03-13 13:03:24 - 24.46
2023-03-13 11:56:24 - 22.09	2023-03-13 12:30:24 - 21.56	2023-03-13 13:04:24 - 24.35
2023-03-13 11:57:24 - 22.1	2023-03-13 12:31:24 - 21.6	2023-03-13 13:05:24 - 24.4
2023-03-13 11:58:24 - 22.11	2023-03-13 12:32:24 - 21.55	2023-03-13 13:06:24 - 24.32
2023-03-13 11:59:24 - 22.82	2023-03-13 12:33:24 - 21.56	2023-03-13 13:07:24 - 24.41
2023-03-13 12:00:24 - 21.58	2023-03-13 12:34:24 - 21.55	2023-03-13 13:08:24 - 24.49
2023-03-13 12:01:24 - 21.55	2023-03-13 12:35:24 - 21.54	2023-03-13 13:09:24 - 24.39
2023-03-13 12:02:24 - 21.53	2023-03-13 12:36:24 - 21.56	2023-03-13 13:10:24 - 24.29
2023-03-13 12:03:24 - 21.57	2023-03-13 12:37:24 - 21.65	2023-03-13 13:11:24 - 24.39
2023-03-13 12:04:24 - 21.51	2023-03-13 12:38:24 - 21.55	2023-03-13 13:12:24 - 24.39
2023-03-13 12:05:24 - 21.56	2023-03-13 12:39:24 - 21.59	2023-03-13 13:13:24 - 24.36
2023-03-13 12:06:24 - 21.56	2023-03-13 12:40:24 - 21.54	2023-03-13 13:14:24 - 24.35
2023-03-13 12:07:24 - 21.48	2023-03-13 12:41:24 - 21.54	2023-03-13 13:15:24 - 24.41
2023-03-13 12:08:24 - 21.53	2023-03-13 12:42:24 - 21.6	2023-03-13 13:16:24 - 24.38
2023-03-13 12:09:24 - 21.55	2023-03-13 12:43:24 - 21.62	2023-03-13 13:17:24 - 24.37
2023-03-13 12:10:24 - 21.61	2023-03-13 12:44:24 - 21.47	2023-03-13 13:18:24 - 24.49
2023-03-13 12:11:24 - 21.68	2023-03-13 12:45:24 - 21.41	2023-03-13 13:19:24 - 24.4
2023-03-13 12:12:24 - 21.55	2023-03-13 12:46:24 - 21.61	2023-03-13 13:20:24 - 24.42
2023-03-13 12:13:24 - 21.55	2023-03-13 12:47:24 - 21.47	2023-03-13 13:21:24 - 24.28
2023-03-13 12:14:24 - 21.54	2023-03-13 12:48:24 - 21.54	2023-03-13 13:22:24 - 24.39
2023-03-13 12:15:24 - 21.53	2023-03-13 12:49:24 - 21.57	2023-03-13 13:23:24 - 24.42
2023-03-13 12:16:24 - 21.5	2023-03-13 12:50:24 - 21.54	2023-03-13 13:24:24 - 24.42
2023-03-13 12:17:24 - 21.6	2023-03-13 12:51:24 - 21.57	2023-03-13 13:25:24 - 24.36
2023-03-13 12:18:24 - 21.64	2023-03-13 12:52:24 - 21.54	2023-03-13 13:26:24 - 24.35
2023-03-13 12:19:24 - 21.55	2023-03-13 12:53:24 - 21.59	2023-03-13 13:27:24 - 24.38
2023-03-13 12:20:24 - 21.54	2023-03-13 12:54:24 - 21.6	2023-03-13 13:28:24 - 24.52
2023-03-13 12:21:24 - 21.56	2023-03-13 12:55:24 - 21.54	2023-03-13 13:29:24 - 24.42
2023-03-13 12:22:24 - 21.56	2023-03-13 12:56:24 - 21.56	2023-03-13 13:30:24 - 24.36
2023-03-13 12:23:24 - 21.65	2023-03-13 12:57:24 - 21.53	2023-03-13 13:31:24 - 24.27
2023-03-13 12:24:24 - 21.48	2023-03-13 12:58:24 - 21.59	2023-03-13 13:32:24 - 24.42
2023-03-13 12:25:24 - 21.59	2023-03-13 12:59:24 - 21.26	2023-03-13 13:33:24 - 24.38
2023-03-13 12:26:24 - 21.57	2023-03-13 13:00:24 - 24.37	2023-03-13 13:34:24 - 24.35
2023-03-13 12:27:24 - 21.55	2023-03-13 13:01:24 - 24.37	2023-03-13 13:35:24 - 24.37

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 13:36:24 - 24.25	2023-03-13 14:10:24 - 22.89	2023-03-13 14:44:24 - 22.95
2023-03-13 13:37:24 - 24.41	2023-03-13 14:11:24 - 22.99	2023-03-13 14:45:24 - 22.91
2023-03-13 13:38:24 - 24.47	2023-03-13 14:12:24 - 22.9	2023-03-13 14:46:24 - 22.83
2023-03-13 13:39:24 - 24.55	2023-03-13 14:13:24 - 22.9	2023-03-13 14:47:24 - 22.91
2023-03-13 13:40:24 - 24.25	2023-03-13 14:14:24 - 22.93	2023-03-13 14:48:24 - 22.89
2023-03-13 13:41:24 - 24.38	2023-03-13 14:15:24 - 22.88	2023-03-13 14:49:24 - 22.92
2023-03-13 13:42:24 - 24.52	2023-03-13 14:16:24 - 22.99	2023-03-13 14:50:24 - 22.93
2023-03-13 13:43:24 - 24.43	2023-03-13 14:17:24 - 22.9	2023-03-13 14:51:24 - 22.9
2023-03-13 13:44:24 - 24.33	2023-03-13 14:18:24 - 23.05	2023-03-13 14:52:24 - 22.92
2023-03-13 13:45:24 - 24.37	2023-03-13 14:19:24 - 22.88	2023-03-13 14:53:24 - 22.93
2023-03-13 13:46:24 - 24.32	2023-03-13 14:20:24 - 22.89	2023-03-13 14:54:24 - 22.95
2023-03-13 13:47:24 - 24.31	2023-03-13 14:21:24 - 22.92	2023-03-13 14:55:24 - 22.98
2023-03-13 13:48:24 - 24.38	2023-03-13 14:22:24 - 22.99	2023-03-13 14:56:24 - 22.86
2023-03-13 13:49:24 - 24.41	2023-03-13 14:23:24 - 22.97	2023-03-13 14:57:24 - 22.82
2023-03-13 13:50:24 - 24.32	2023-03-13 14:24:24 - 22.91	2023-03-13 14:58:24 - 22.86
2023-03-13 13:51:24 - 24.37	2023-03-13 14:25:24 - 22.91	2023-03-13 14:59:24 - 22.26
2023-03-13 13:52:24 - 24.4	2023-03-13 14:26:24 - 22.87	2023-03-13 15:00:24 - 20.06
2023-03-13 13:53:24 - 24.44	2023-03-13 14:27:24 - 22.93	2023-03-13 15:01:24 - 20.0
2023-03-13 13:54:24 - 24.26	2023-03-13 14:28:24 - 23.01	2023-03-13 15:02:24 - 20.06
2023-03-13 13:55:24 - 24.3	2023-03-13 14:29:24 - 22.82	2023-03-13 15:03:24 - 20.04
2023-03-13 13:56:24 - 24.37	2023-03-13 14:30:24 - 22.91	2023-03-13 15:04:24 - 20.13
2023-03-13 13:57:24 - 24.32	2023-03-13 14:31:24 - 22.98	2023-03-13 15:05:24 - 20.08
2023-03-13 13:58:24 - 24.41	2023-03-13 14:32:24 - 22.9	2023-03-13 15:06:24 - 20.06
2023-03-13 13:59:24 - 24.91	2023-03-13 14:33:24 - 22.93	2023-03-13 15:07:24 - 20.14
2023-03-13 14:00:24 - 23.02	2023-03-13 14:34:24 - 22.95	2023-03-13 15:08:24 - 20.07
2023-03-13 14:01:24 - 22.96	2023-03-13 14:35:24 - 22.94	2023-03-13 15:09:24 - 20.04
2023-03-13 14:02:24 - 22.87	2023-03-13 14:36:24 - 22.91	2023-03-13 15:10:24 - 20.1
2023-03-13 14:03:24 - 22.91	2023-03-13 14:37:24 - 22.86	2023-03-13 15:11:24 - 19.9
2023-03-13 14:04:24 - 23.0	2023-03-13 14:38:24 - 22.88	2023-03-13 15:12:24 - 20.08
2023-03-13 14:05:24 - 22.81	2023-03-13 14:39:24 - 22.95	2023-03-13 15:13:24 - 20.06
2023-03-13 14:06:24 - 22.89	2023-03-13 14:40:24 - 22.89	2023-03-13 15:14:24 - 20.01
2023-03-13 14:07:24 - 22.87	2023-03-13 14:41:24 - 23.05	2023-03-13 15:15:24 - 20.03
2023-03-13 14:08:24 - 22.88	2023-03-13 14:42:24 - 22.96	2023-03-13 15:16:24 - 20.07
2023-03-13 14:09:24 - 22.93	2023-03-13 14:43:24 - 22.95	2023-03-13 15:17:24 - 19.98

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 15:18:24 - 19.99	2023-03-13 15:52:24 - 20.06	2023-03-13 16:26:24 - 21.07
2023-03-13 15:19:24 - 19.87	2023-03-13 15:53:24 - 20.05	2023-03-13 16:27:24 - 21.15
2023-03-13 15:20:24 - 20.02	2023-03-13 15:54:24 - 20.05	2023-03-13 16:28:24 - 21.05
2023-03-13 15:21:24 - 20.02	2023-03-13 15:55:24 - 20.04	2023-03-13 16:29:24 - 21.03
2023-03-13 15:22:24 - 20.05	2023-03-13 15:56:24 - 19.85	2023-03-13 16:30:24 - 21.22
2023-03-13 15:23:24 - 20.13	2023-03-13 15:57:24 - 20.1	2023-03-13 16:31:24 - 21.11
2023-03-13 15:24:24 - 20.06	2023-03-13 15:58:24 - 20.1	2023-03-13 16:32:24 - 20.93
2023-03-13 15:25:24 - 20.08	2023-03-13 15:59:24 - 20.58	2023-03-13 16:33:24 - 21.09
2023-03-13 15:26:24 - 20.06	2023-03-13 16:00:24 - 21.07	2023-03-13 16:34:24 - 21.07
2023-03-13 15:27:24 - 20.09	2023-03-13 16:01:24 - 21.06	2023-03-13 16:35:24 - 21.1
2023-03-13 15:28:24 - 20.0	2023-03-13 16:02:24 - 21.06	2023-03-13 16:36:24 - 21.21
2023-03-13 15:29:24 - 20.05	2023-03-13 16:03:24 - 21.09	2023-03-13 16:37:24 - 21.12
2023-03-13 15:30:24 - 20.04	2023-03-13 16:04:24 - 21.25	2023-03-13 16:38:24 - 21.2
2023-03-13 15:31:24 - 20.05	2023-03-13 16:05:24 - 21.1	2023-03-13 16:39:24 - 21.07
2023-03-13 15:32:24 - 20.04	2023-03-13 16:06:24 - 21.03	2023-03-13 16:40:24 - 21.17
2023-03-13 15:33:24 - 20.03	2023-03-13 16:07:24 - 21.08	2023-03-13 16:41:24 - 21.1
2023-03-13 15:34:24 - 20.08	2023-03-13 16:08:24 - 21.1	2023-03-13 16:42:24 - 21.05
2023-03-13 15:35:24 - 20.07	2023-03-13 16:09:24 - 21.11	2023-03-13 16:43:24 - 21.14
2023-03-13 15:36:24 - 20.01	2023-03-13 16:10:24 - 21.01	2023-03-13 16:44:24 - 21.15
2023-03-13 15:37:24 - 19.89	2023-03-13 16:11:24 - 21.18	2023-03-13 16:45:24 - 21.1
2023-03-13 15:38:24 - 20.01	2023-03-13 16:12:24 - 21.09	2023-03-13 16:46:24 - 21.14
2023-03-13 15:39:24 - 20.06	2023-03-13 16:13:24 - 21.11	2023-03-13 16:47:24 - 21.14
2023-03-13 15:40:24 - 19.95	2023-03-13 16:14:24 - 21.14	2023-03-13 16:48:24 - 21.16
2023-03-13 15:41:24 - 20.08	2023-03-13 16:15:24 - 21.1	2023-03-13 16:49:24 - 21.22
2023-03-13 15:42:24 - 20.16	2023-03-13 16:16:24 - 21.1	2023-03-13 16:50:24 - 21.11
2023-03-13 15:43:24 - 20.11	2023-03-13 16:17:24 - 21.06	2023-03-13 16:51:24 - 21.07
2023-03-13 15:44:24 - 20.07	2023-03-13 16:18:24 - 21.16	2023-03-13 16:52:24 - 21.03
2023-03-13 15:45:24 - 20.06	2023-03-13 16:19:24 - 21.09	2023-03-13 16:53:24 - 21.1
2023-03-13 15:46:24 - 19.97	2023-03-13 16:20:24 - 21.13	2023-03-13 16:54:24 - 21.12
2023-03-13 15:47:24 - 20.07	2023-03-13 16:21:24 - 21.11	2023-03-13 16:55:24 - 21.13
2023-03-13 15:48:24 - 19.98	2023-03-13 16:22:24 - 21.09	2023-03-13 16:56:24 - 20.96
2023-03-13 15:49:24 - 20.03	2023-03-13 16:23:24 - 21.11	2023-03-13 16:57:24 - 21.08
2023-03-13 15:50:24 - 19.99	2023-03-13 16:24:24 - 21.08	2023-03-13 16:58:24 - 21.05
2023-03-13 15:51:24 - 20.13	2023-03-13 16:25:24 - 21.13	2023-03-13 16:59:24 - 20.31

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 17:00:24 - 25.8	2023-03-13 17:34:24 - 25.68	2023-03-13 18:08:24 - 25.31
2023-03-13 17:01:24 - 25.86	2023-03-13 17:35:24 - 25.77	2023-03-13 18:09:24 - 25.25
2023-03-13 17:02:24 - 25.78	2023-03-13 17:36:24 - 25.86	2023-03-13 18:10:24 - 25.23
2023-03-13 17:03:24 - 25.78	2023-03-13 17:37:24 - 25.8	2023-03-13 18:11:24 - 25.28
2023-03-13 17:04:24 - 25.65	2023-03-13 17:38:24 - 25.77	2023-03-13 18:12:24 - 25.31
2023-03-13 17:05:24 - 25.61	2023-03-13 17:39:24 - 25.65	2023-03-13 18:13:24 - 25.35
2023-03-13 17:06:24 - 25.48	2023-03-13 17:40:24 - 25.86	2023-03-13 18:14:24 - 25.35
2023-03-13 17:07:24 - 25.99	2023-03-13 17:41:24 - 25.79	2023-03-13 18:15:24 - 25.29
2023-03-13 17:08:24 - 25.74	2023-03-13 17:42:24 - 25.71	2023-03-13 18:16:24 - 25.33
2023-03-13 17:09:24 - 25.76	2023-03-13 17:43:24 - 25.66	2023-03-13 18:17:24 - 25.32
2023-03-13 17:10:24 - 25.86	2023-03-13 17:44:24 - 25.88	2023-03-13 18:18:24 - 25.34
2023-03-13 17:11:24 - 25.81	2023-03-13 17:45:24 - 25.69	2023-03-13 18:19:24 - 25.31
2023-03-13 17:12:24 - 25.83	2023-03-13 17:46:24 - 25.78	2023-03-13 18:20:24 - 25.29
2023-03-13 17:13:24 - 25.74	2023-03-13 17:47:24 - 25.75	2023-03-13 18:21:24 - 25.31
2023-03-13 17:14:24 - 25.83	2023-03-13 17:48:24 - 25.79	2023-03-13 18:22:24 - 25.29
2023-03-13 17:15:24 - 25.82	2023-03-13 17:49:24 - 25.76	2023-03-13 18:23:24 - 25.3
2023-03-13 17:16:24 - 25.72	2023-03-13 17:50:24 - 25.72	2023-03-13 18:24:24 - 25.31
2023-03-13 17:17:24 - 25.8	2023-03-13 17:51:24 - 25.86	2023-03-13 18:25:24 - 25.22
2023-03-13 17:18:24 - 25.76	2023-03-13 17:52:24 - 25.77	2023-03-13 18:26:24 - 25.22
2023-03-13 17:19:24 - 25.78	2023-03-13 17:53:24 - 25.79	2023-03-13 18:27:24 - 25.22
2023-03-13 17:20:24 - 25.83	2023-03-13 17:54:24 - 25.72	2023-03-13 18:28:24 - 25.33
2023-03-13 17:21:24 - 25.73	2023-03-13 17:55:24 - 25.79	2023-03-13 18:29:24 - 25.3
2023-03-13 17:22:24 - 25.79	2023-03-13 17:56:24 - 25.81	2023-03-13 18:30:24 - 25.56
2023-03-13 17:23:24 - 25.78	2023-03-13 17:57:24 - 25.86	2023-03-13 18:31:24 - 25.29
2023-03-13 17:24:24 - 25.76	2023-03-13 17:58:24 - 25.7	2023-03-13 18:32:24 - 25.3
2023-03-13 17:25:24 - 25.77	2023-03-13 17:59:24 - 25.83	2023-03-13 18:33:24 - 25.34
2023-03-13 17:26:24 - 25.74	2023-03-13 18:00:24 - 25.25	2023-03-13 18:34:24 - 25.3
2023-03-13 17:27:24 - 25.76	2023-03-13 18:01:24 - 25.27	2023-03-13 18:35:24 - 25.39
2023-03-13 17:28:24 - 25.67	2023-03-13 18:02:24 - 25.22	2023-03-13 18:36:24 - 25.33
2023-03-13 17:29:24 - 25.79	2023-03-13 18:03:24 - 25.31	2023-03-13 18:37:24 - 25.3
2023-03-13 17:30:24 - 25.81	2023-03-13 18:04:24 - 25.31	2023-03-13 18:38:24 - 25.28
2023-03-13 17:31:24 - 25.7	2023-03-13 18:05:24 - 25.32	2023-03-13 18:39:24 - 25.28
2023-03-13 17:32:24 - 25.81	2023-03-13 18:06:24 - 25.27	2023-03-13 18:40:24 - 25.26
2023-03-13 17:33:24 - 25.8	2023-03-13 18:07:24 - 25.3	2023-03-13 18:41:24 - 25.43

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 18:42:24 - 25.36	2023-03-13 19:16:24 - 26.52	2023-03-13 19:50:24 - 26.47
2023-03-13 18:43:24 - 25.34	2023-03-13 19:17:24 - 26.48	2023-03-13 19:51:24 - 26.54
2023-03-13 18:44:24 - 25.18	2023-03-13 19:18:24 - 26.43	2023-03-13 19:52:24 - 26.44
2023-03-13 18:45:24 - 25.39	2023-03-13 19:19:24 - 26.45	2023-03-13 19:53:24 - 26.52
2023-03-13 18:46:24 - 25.28	2023-03-13 19:20:24 - 26.46	2023-03-13 19:54:24 - 26.47
2023-03-13 18:47:24 - 25.35	2023-03-13 19:21:24 - 26.48	2023-03-13 19:55:24 - 26.35
2023-03-13 18:48:24 - 25.33	2023-03-13 19:22:24 - 26.43	2023-03-13 19:56:24 - 26.37
2023-03-13 18:49:24 - 25.29	2023-03-13 19:23:24 - 26.44	2023-03-13 19:57:24 - 26.46
2023-03-13 18:50:24 - 25.38	2023-03-13 19:24:24 - 26.52	2023-03-13 19:58:24 - 26.37
2023-03-13 18:51:24 - 25.3	2023-03-13 19:25:24 - 26.47	2023-03-13 19:59:24 - 26.78
2023-03-13 18:52:24 - 25.31	2023-03-13 19:26:24 - 26.45	2023-03-13 20:00:24 - 26.24
2023-03-13 18:53:24 - 25.33	2023-03-13 19:27:24 - 26.45	2023-03-13 20:01:24 - 26.28
2023-03-13 18:54:24 - 25.29	2023-03-13 19:28:24 - 26.39	2023-03-13 20:02:24 - 26.25
2023-03-13 18:55:24 - 25.3	2023-03-13 19:29:24 - 26.48	2023-03-13 20:03:24 - 26.31
2023-03-13 18:56:24 - 25.32	2023-03-13 19:30:24 - 26.45	2023-03-13 20:04:24 - 26.22
2023-03-13 18:57:24 - 25.31	2023-03-13 19:31:24 - 26.5	2023-03-13 20:05:24 - 26.22
2023-03-13 18:58:24 - 25.32	2023-03-13 19:32:24 - 26.45	2023-03-13 20:06:24 - 26.21
2023-03-13 18:59:24 - 24.85	2023-03-13 19:33:24 - 26.42	2023-03-13 20:07:24 - 26.23
2023-03-13 19:00:24 - 26.48	2023-03-13 19:34:24 - 26.54	2023-03-13 20:08:24 - 26.19
2023-03-13 19:01:24 - 26.59	2023-03-13 19:35:24 - 26.47	2023-03-13 20:09:24 - 26.23
2023-03-13 19:02:24 - 26.47	2023-03-13 19:36:24 - 26.45	2023-03-13 20:10:24 - 26.13
2023-03-13 19:03:24 - 26.41	2023-03-13 19:37:24 - 26.47	2023-03-13 20:11:24 - 26.22
2023-03-13 19:04:24 - 26.47	2023-03-13 19:38:24 - 26.35	2023-03-13 20:12:24 - 26.29
2023-03-13 19:05:24 - 26.44	2023-03-13 19:39:24 - 26.48	2023-03-13 20:13:24 - 26.1
2023-03-13 19:06:24 - 26.39	2023-03-13 19:40:24 - 26.48	2023-03-13 20:14:24 - 26.2
2023-03-13 19:07:24 - 26.51	2023-03-13 19:41:24 - 26.46	2023-03-13 20:15:24 - 26.29
2023-03-13 19:08:24 - 26.39	2023-03-13 19:42:24 - 26.44	2023-03-13 20:16:24 - 26.19
2023-03-13 19:09:24 - 26.45	2023-03-13 19:43:24 - 26.46	2023-03-13 20:17:24 - 26.16
2023-03-13 19:10:24 - 26.48	2023-03-13 19:44:24 - 26.43	2023-03-13 20:18:24 - 26.12
2023-03-13 19:11:24 - 26.39	2023-03-13 19:45:24 - 26.46	2023-03-13 20:19:24 - 26.28
2023-03-13 19:12:24 - 26.36	2023-03-13 19:46:24 - 26.47	2023-03-13 20:20:24 - 26.21
2023-03-13 19:13:24 - 26.39	2023-03-13 19:47:24 - 26.46	2023-03-13 20:21:24 - 26.21
2023-03-13 19:14:24 - 26.46	2023-03-13 19:48:24 - 26.46	2023-03-13 20:22:24 - 26.21
2023-03-13 19:15:24 - 26.53	2023-03-13 19:49:24 - 26.45	2023-03-13 20:23:24 - 26.25

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 20:24:24 - 26.19	2023-03-13 20:58:24 - 26.29	2023-03-13 21:32:24 - 25.79
2023-03-13 20:25:24 - 26.23	2023-03-13 20:59:24 - 26.18	2023-03-13 21:33:24 - 25.73
2023-03-13 20:26:24 - 26.28	2023-03-13 21:00:24 - 25.73	2023-03-13 21:34:24 - 25.86
2023-03-13 20:27:24 - 26.16	2023-03-13 21:01:24 - 25.79	2023-03-13 21:35:24 - 25.82
2023-03-13 20:28:24 - 26.19	2023-03-13 21:02:24 - 25.94	2023-03-13 21:36:24 - 25.81
2023-03-13 20:29:24 - 26.21	2023-03-13 21:03:24 - 25.79	2023-03-13 21:37:24 - 25.99
2023-03-13 20:30:24 - 26.2	2023-03-13 21:04:24 - 25.8	2023-03-13 21:38:24 - 25.82
2023-03-13 20:31:24 - 26.2	2023-03-13 21:05:24 - 25.85	2023-03-13 21:39:24 - 25.92
2023-03-13 20:32:24 - 26.17	2023-03-13 21:06:24 - 25.85	2023-03-13 21:40:24 - 25.84
2023-03-13 20:33:24 - 26.2	2023-03-13 21:07:24 - 25.83	2023-03-13 21:41:24 - 25.85
2023-03-13 20:34:24 - 26.28	2023-03-13 21:08:24 - 25.85	2023-03-13 21:42:24 - 25.94
2023-03-13 20:35:24 - 26.23	2023-03-13 21:09:24 - 25.9	2023-03-13 21:43:24 - 25.85
2023-03-13 20:36:24 - 26.24	2023-03-13 21:10:24 - 25.86	2023-03-13 21:44:24 - 25.82
2023-03-13 20:37:24 - 26.22	2023-03-13 21:11:24 - 25.84	2023-03-13 21:45:24 - 25.87
2023-03-13 20:38:24 - 26.4	2023-03-13 21:12:24 - 25.86	2023-03-13 21:46:24 - 25.9
2023-03-13 20:39:24 - 26.22	2023-03-13 21:13:24 - 25.83	2023-03-13 21:47:24 - 25.75
2023-03-13 20:40:24 - 26.25	2023-03-13 21:14:24 - 25.91	2023-03-13 21:48:24 - 25.81
2023-03-13 20:41:24 - 26.23	2023-03-13 21:15:24 - 25.84	2023-03-13 21:49:24 - 25.89
2023-03-13 20:42:24 - 26.26	2023-03-13 21:16:24 - 25.81	2023-03-13 21:50:24 - 25.84
2023-03-13 20:43:24 - 26.28	2023-03-13 21:17:24 - 25.75	2023-03-13 21:51:24 - 25.82
2023-03-13 20:44:24 - 26.19	2023-03-13 21:18:24 - 25.88	2023-03-13 21:52:24 - 25.82
2023-03-13 20:45:24 - 25.99	2023-03-13 21:19:24 - 25.93	2023-03-13 21:53:24 - 25.85
2023-03-13 20:46:24 - 26.23	2023-03-13 21:20:24 - 25.93	2023-03-13 21:54:24 - 25.78
2023-03-13 20:47:24 - 26.23	2023-03-13 21:21:24 - 25.92	2023-03-13 21:55:24 - 25.84
2023-03-13 20:48:24 - 26.22	2023-03-13 21:22:24 - 25.97	2023-03-13 21:56:24 - 25.87
2023-03-13 20:49:24 - 26.33	2023-03-13 21:23:24 - 25.97	2023-03-13 21:57:24 - 25.82
2023-03-13 20:50:24 - 26.22	2023-03-13 21:24:24 - 25.77	2023-03-13 21:58:24 - 25.78
2023-03-13 20:51:24 - 26.27	2023-03-13 21:25:24 - 25.76	2023-03-13 21:59:24 - 25.58
2023-03-13 20:52:24 - 26.16	2023-03-13 21:26:24 - 25.82	2023-03-13 22:00:24 - 25.55
2023-03-13 20:53:24 - 26.15	2023-03-13 21:27:24 - 25.96	2023-03-13 22:01:24 - 25.57
2023-03-13 20:54:24 - 26.2	2023-03-13 21:28:24 - 25.76	2023-03-13 22:02:24 - 25.57
2023-03-13 20:55:24 - 26.23	2023-03-13 21:29:24 - 25.83	2023-03-13 22:03:24 - 25.57
2023-03-13 20:56:24 - 26.21	2023-03-13 21:30:24 - 25.84	2023-03-13 22:04:24 - 25.72
2023-03-13 20:57:24 - 26.26	2023-03-13 21:31:24 - 25.77	2023-03-13 22:05:24 - 25.56

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 22:06:24 - 25.52	2023-03-13 22:40:24 - 25.56	2023-03-13 23:14:24 - 26.29
2023-03-13 22:07:24 - 25.8	2023-03-13 22:41:24 - 25.59	2023-03-13 23:15:24 - 26.37
2023-03-13 22:08:24 - 25.59	2023-03-13 22:42:24 - 25.57	2023-03-13 23:16:24 - 26.3
2023-03-13 22:09:24 - 25.55	2023-03-13 22:43:24 - 25.63	2023-03-13 23:17:24 - 26.2
2023-03-13 22:10:24 - 25.54	2023-03-13 22:44:24 - 25.55	2023-03-13 23:18:24 - 26.23
2023-03-13 22:11:24 - 25.53	2023-03-13 22:45:24 - 25.53	2023-03-13 23:19:24 - 26.34
2023-03-13 22:12:24 - 25.58	2023-03-13 22:46:24 - 25.61	2023-03-13 23:20:24 - 26.25
2023-03-13 22:13:24 - 25.53	2023-03-13 22:47:24 - 25.56	2023-03-13 23:21:24 - 26.29
2023-03-13 22:14:24 - 25.7	2023-03-13 22:48:24 - 25.53	2023-03-13 23:22:24 - 26.23
2023-03-13 22:15:24 - 25.6	2023-03-13 22:49:24 - 25.52	2023-03-13 23:23:24 - 26.34
2023-03-13 22:16:24 - 25.59	2023-03-13 22:50:24 - 25.59	2023-03-13 23:24:24 - 26.35
2023-03-13 22:17:24 - 25.6	2023-03-13 22:51:24 - 25.59	2023-03-13 23:25:24 - 26.21
2023-03-13 22:18:24 - 25.55	2023-03-13 22:52:24 - 25.54	2023-03-13 23:26:24 - 26.27
2023-03-13 22:19:24 - 25.56	2023-03-13 22:53:24 - 25.57	2023-03-13 23:27:24 - 26.26
2023-03-13 22:20:24 - 25.47	2023-03-13 22:54:24 - 25.58	2023-03-13 23:28:24 - 26.34
2023-03-13 22:21:24 - 25.52	2023-03-13 22:55:24 - 25.62	2023-03-13 23:29:24 - 26.3
2023-03-13 22:22:24 - 25.55	2023-03-13 22:56:24 - 25.53	2023-03-13 23:30:24 - 26.24
2023-03-13 22:23:24 - 25.59	2023-03-13 22:57:24 - 25.58	2023-03-13 23:31:24 - 26.37
2023-03-13 22:24:24 - 25.54	2023-03-13 22:58:24 - 25.55	2023-03-13 23:32:24 - 26.08
2023-03-13 22:25:24 - 25.56	2023-03-13 22:59:24 - 25.02	2023-03-13 23:33:24 - 26.23
2023-03-13 22:26:24 - 25.61	2023-03-13 23:00:24 - 26.25	2023-03-13 23:34:24 - 26.31
2023-03-13 22:27:24 - 25.58	2023-03-13 23:01:24 - 26.28	2023-03-13 23:35:24 - 26.26
2023-03-13 22:28:24 - 25.62	2023-03-13 23:02:24 - 26.28	2023-03-13 23:36:24 - 26.34
2023-03-13 22:29:24 - 25.52	2023-03-13 23:03:24 - 26.29	2023-03-13 23:37:24 - 26.23
2023-03-13 22:30:24 - 25.57	2023-03-13 23:04:24 - 26.25	2023-03-13 23:38:24 - 26.3
2023-03-13 22:31:24 - 25.56	2023-03-13 23:05:24 - 26.29	2023-03-13 23:39:24 - 26.3
2023-03-13 22:32:24 - 25.58	2023-03-13 23:06:24 - 26.49	2023-03-13 23:40:24 - 26.24
2023-03-13 22:33:24 - 25.53	2023-03-13 23:07:24 - 26.31	2023-03-13 23:41:24 - 26.3
2023-03-13 22:34:24 - 25.53	2023-03-13 23:08:24 - 26.27	2023-03-13 23:42:24 - 26.29
2023-03-13 22:35:24 - 25.51	2023-03-13 23:09:24 - 26.28	2023-03-13 23:43:24 - 26.29
2023-03-13 22:36:24 - 25.53	2023-03-13 23:10:24 - 26.28	2023-03-13 23:44:24 - 26.3
2023-03-13 22:37:24 - 25.58	2023-03-13 23:11:24 - 26.28	2023-03-13 23:45:24 - 26.28
2023-03-13 22:38:24 - 25.57	2023-03-13 23:12:24 - 26.2	2023-03-13 23:46:24 - 26.26
2023-03-13 22:39:24 - 25.5	2023-03-13 23:13:24 - 26.31	2023-03-13 23:47:24 - 26.13

Horário/Leitura
2023-03-13 23:48:24 - 26.29
2023-03-13 23:49:24 - 26.26
2023-03-13 23:50:24 - 26.31
2023-03-13 23:51:24 - 26.13
2023-03-13 23:52:24 - 26.2
2023-03-13 23:53:24 - 26.31
2023-03-13 23:54:24 - 26.3
2023-03-13 23:55:24 - 26.35
2023-03-13 23:56:24 - 26.29
2023-03-13 23:57:24 - 26.3
2023-03-13 23:58:24 - 26.27
2023-03-13 23:59:24 - 26.43

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 00:00:37 - 29.35	2023-03-13 00:34:37 - 29.21	2023-03-13 01:08:37 - 29.22
2023-03-13 00:01:37 - 29.29	2023-03-13 00:35:37 - 29.31	2023-03-13 01:09:37 - 29.21
2023-03-13 00:02:37 - 29.31	2023-03-13 00:36:37 - 29.34	2023-03-13 01:10:37 - 29.26
2023-03-13 00:03:37 - 29.14	2023-03-13 00:37:37 - 29.16	2023-03-13 01:11:37 - 29.06
2023-03-13 00:04:37 - 29.33	2023-03-13 00:38:37 - 29.21	2023-03-13 01:12:37 - 29.17
2023-03-13 00:05:37 - 29.23	2023-03-13 00:39:37 - 29.24	2023-03-13 01:13:37 - 29.14
2023-03-13 00:06:37 - 29.33	2023-03-13 00:40:37 - 29.04	2023-03-13 01:14:37 - 29.31
2023-03-13 00:07:37 - 29.27	2023-03-13 00:41:37 - 29.23	2023-03-13 01:15:37 - 29.21
2023-03-13 00:08:37 - 29.32	2023-03-13 00:42:37 - 29.35	2023-03-13 01:16:37 - 29.27
2023-03-13 00:09:37 - 29.32	2023-03-13 00:43:37 - 29.24	2023-03-13 01:17:37 - 29.31
2023-03-13 00:10:37 - 29.32	2023-03-13 00:44:37 - 29.27	2023-03-13 01:18:37 - 29.2
2023-03-13 00:11:37 - 29.24	2023-03-13 00:45:37 - 29.33	2023-03-13 01:19:37 - 29.23
2023-03-13 00:12:37 - 29.3	2023-03-13 00:46:37 - 29.22	2023-03-13 01:20:37 - 29.2
2023-03-13 00:13:37 - 29.24	2023-03-13 00:47:37 - 29.3	2023-03-13 01:21:37 - 29.14
2023-03-13 00:14:37 - 29.31	2023-03-13 00:48:37 - 29.1	2023-03-13 01:22:37 - 29.25
2023-03-13 00:15:37 - 29.31	2023-03-13 00:49:37 - 29.29	2023-03-13 01:23:37 - 29.18
2023-03-13 00:16:37 - 29.18	2023-03-13 00:50:37 - 29.26	2023-03-13 01:24:37 - 29.12
2023-03-13 00:17:37 - 29.24	2023-03-13 00:51:37 - 29.21	2023-03-13 01:25:37 - 29.2
2023-03-13 00:18:37 - 29.29	2023-03-13 00:52:37 - 29.32	2023-03-13 01:26:37 - 29.16
2023-03-13 00:19:37 - 29.21	2023-03-13 00:53:37 - 29.25	2023-03-13 01:27:37 - 29.17
2023-03-13 00:20:37 - 29.32	2023-03-13 00:54:37 - 29.29	2023-03-13 01:28:37 - 29.16
2023-03-13 00:21:37 - 29.36	2023-03-13 00:55:37 - 29.3	2023-03-13 01:29:37 - 29.27
2023-03-13 00:22:37 - 29.31	2023-03-13 00:56:37 - 29.27	2023-03-13 01:30:37 - 29.23
2023-03-13 00:23:37 - 29.34	2023-03-13 00:57:37 - 29.28	2023-03-13 01:31:37 - 29.23
2023-03-13 00:24:37 - 29.32	2023-03-13 00:58:37 - 29.34	2023-03-13 01:32:37 - 29.11
2023-03-13 00:25:37 - 29.18	2023-03-13 00:59:37 - 29.59	2023-03-13 01:33:37 - 29.2
2023-03-13 00:26:37 - 29.39	2023-03-13 01:00:37 - 29.19	2023-03-13 01:34:37 - 29.29
2023-03-13 00:27:37 - 29.3	2023-03-13 01:01:37 - 29.25	2023-03-13 01:35:37 - 29.2
2023-03-13 00:28:37 - 29.34	2023-03-13 01:02:37 - 29.24	2023-03-13 01:36:37 - 29.25
2023-03-13 00:29:37 - 29.25	2023-03-13 01:03:37 - 29.29	2023-03-13 01:37:37 - 29.22
2023-03-13 00:30:37 - 29.28	2023-03-13 01:04:37 - 29.18	2023-03-13 01:38:37 - 29.18
2023-03-13 00:31:37 - 29.25	2023-03-13 01:05:37 - 29.21	2023-03-13 01:39:37 - 29.09
2023-03-13 00:32:37 - 29.26	2023-03-13 01:06:37 - 29.19	2023-03-13 01:40:37 - 29.09
2023-03-13 00:33:37 - 29.39	2023-03-13 01:07:37 - 29.17	2023-03-13 01:41:37 - 29.33

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 01:42:37 - 29.23	2023-03-13 02:16:37 - 29.01	2023-03-13 02:50:37 - 29.17
2023-03-13 01:43:37 - 29.22	2023-03-13 02:17:37 - 29.15	2023-03-13 02:51:37 - 29.09
2023-03-13 01:44:37 - 29.3	2023-03-13 02:18:37 - 29.14	2023-03-13 02:52:37 - 29.1
2023-03-13 01:45:37 - 29.15	2023-03-13 02:19:37 - 29.07	2023-03-13 02:53:37 - 29.12
2023-03-13 01:46:37 - 29.22	2023-03-13 02:20:37 - 29.07	2023-03-13 02:54:37 - 29.19
2023-03-13 01:47:37 - 29.18	2023-03-13 02:21:37 - 29.13	2023-03-13 02:55:37 - 29.14
2023-03-13 01:48:37 - 29.21	2023-03-13 02:22:37 - 29.13	2023-03-13 02:56:37 - 29.13
2023-03-13 01:49:37 - 29.16	2023-03-13 02:23:37 - 29.15	2023-03-13 02:57:37 - 29.11
2023-03-13 01:50:37 - 29.17	2023-03-13 02:24:37 - 29.23	2023-03-13 02:58:37 - 29.03
2023-03-13 01:51:37 - 29.22	2023-03-13 02:25:37 - 29.12	2023-03-13 02:59:37 - 28.54
2023-03-13 01:52:37 - 29.14	2023-03-13 02:26:37 - 29.07	2023-03-13 03:00:37 - 28.93
2023-03-13 01:53:37 - 29.22	2023-03-13 02:27:37 - 29.09	2023-03-13 03:01:37 - 29.04
2023-03-13 01:54:37 - 29.22	2023-03-13 02:28:37 - 29.11	2023-03-13 03:02:37 - 28.95
2023-03-13 01:55:37 - 29.26	2023-03-13 02:29:37 - 29.16	2023-03-13 03:03:37 - 28.97
2023-03-13 01:56:37 - 29.36	2023-03-13 02:30:37 - 29.11	2023-03-13 03:04:37 - 28.99
2023-03-13 01:57:37 - 29.18	2023-03-13 02:31:37 - 29.13	2023-03-13 03:05:37 - 28.96
2023-03-13 01:58:37 - 29.25	2023-03-13 02:32:37 - 29.25	2023-03-13 03:06:37 - 29.08
2023-03-13 01:59:37 - 28.68	2023-03-13 02:33:37 - 29.15	2023-03-13 03:07:37 - 28.96
2023-03-13 02:00:37 - 29.15	2023-03-13 02:34:37 - 29.19	2023-03-13 03:08:37 - 28.93
2023-03-13 02:01:37 - 29.14	2023-03-13 02:35:37 - 29.16	2023-03-13 03:09:37 - 28.96
2023-03-13 02:02:37 - 29.16	2023-03-13 02:36:37 - 29.1	2023-03-13 03:10:37 - 29.04
2023-03-13 02:03:37 - 29.11	2023-03-13 02:37:37 - 29.11	2023-03-13 03:11:37 - 29.01
2023-03-13 02:04:37 - 29.31	2023-03-13 02:38:37 - 29.17	2023-03-13 03:12:37 - 29.04
2023-03-13 02:05:37 - 29.17	2023-03-13 02:39:37 - 29.15	2023-03-13 03:13:37 - 28.8
2023-03-13 02:06:37 - 29.24	2023-03-13 02:40:37 - 29.13	2023-03-13 03:14:37 - 29.02
2023-03-13 02:07:37 - 29.17	2023-03-13 02:41:37 - 29.13	2023-03-13 03:15:37 - 29.01
2023-03-13 02:08:37 - 29.17	2023-03-13 02:42:37 - 29.12	2023-03-13 03:16:37 - 28.9
2023-03-13 02:09:37 - 29.06	2023-03-13 02:43:37 - 29.16	2023-03-13 03:17:37 - 29.03
2023-03-13 02:10:37 - 29.13	2023-03-13 02:44:37 - 29.18	2023-03-13 03:18:37 - 28.99
2023-03-13 02:11:37 - 29.03	2023-03-13 02:45:37 - 29.19	2023-03-13 03:19:37 - 29.0
2023-03-13 02:12:37 - 29.06	2023-03-13 02:46:37 - 29.09	2023-03-13 03:20:37 - 28.96
2023-03-13 02:13:37 - 29.06	2023-03-13 02:47:37 - 29.12	2023-03-13 03:21:37 - 28.95
2023-03-13 02:14:37 - 29.03	2023-03-13 02:48:37 - 29.19	2023-03-13 03:22:37 - 28.88
2023-03-13 02:15:37 - 29.04	2023-03-13 02:49:37 - 29.11	2023-03-13 03:23:37 - 29.11

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 03:24:37 - 29.02	2023-03-13 03:58:37 - 28.92	2023-03-13 04:32:37 - 28.75
2023-03-13 03:25:37 - 28.97	2023-03-13 03:59:37 - 29.94	2023-03-13 04:33:37 - 28.7
2023-03-13 03:26:37 - 28.99	2023-03-13 04:00:37 - 28.76	2023-03-13 04:34:37 - 28.73
2023-03-13 03:27:37 - 28.91	2023-03-13 04:01:37 - 28.85	2023-03-13 04:35:37 - 28.78
2023-03-13 03:28:37 - 29.07	2023-03-13 04:02:37 - 28.75	2023-03-13 04:36:37 - 28.73
2023-03-13 03:29:37 - 28.98	2023-03-13 04:03:37 - 28.74	2023-03-13 04:37:37 - 28.75
2023-03-13 03:30:37 - 28.91	2023-03-13 04:04:37 - 28.73	2023-03-13 04:38:37 - 28.68
2023-03-13 03:31:37 - 28.99	2023-03-13 04:05:37 - 28.82	2023-03-13 04:39:37 - 28.81
2023-03-13 03:32:37 - 29.01	2023-03-13 04:06:37 - 28.71	2023-03-13 04:40:37 - 28.79
2023-03-13 03:33:37 - 28.98	2023-03-13 04:07:37 - 28.74	2023-03-13 04:41:37 - 28.7
2023-03-13 03:34:37 - 28.8	2023-03-13 04:08:37 - 28.79	2023-03-13 04:42:37 - 28.75
2023-03-13 03:35:37 - 28.99	2023-03-13 04:09:37 - 28.74	2023-03-13 04:43:37 - 28.89
2023-03-13 03:36:37 - 28.74	2023-03-13 04:10:37 - 28.78	2023-03-13 04:44:37 - 28.62
2023-03-13 03:37:37 - 28.97	2023-03-13 04:11:37 - 28.76	2023-03-13 04:45:37 - 28.74
2023-03-13 03:38:37 - 29.0	2023-03-13 04:12:37 - 28.75	2023-03-13 04:46:37 - 28.74
2023-03-13 03:39:37 - 29.0	2023-03-13 04:13:37 - 28.68	2023-03-13 04:47:37 - 28.71
2023-03-13 03:40:37 - 29.02	2023-03-13 04:14:37 - 28.77	2023-03-13 04:48:37 - 28.75
2023-03-13 03:41:37 - 29.08	2023-03-13 04:15:37 - 28.77	2023-03-13 04:49:37 - 28.75
2023-03-13 03:42:37 - 29.05	2023-03-13 04:16:37 - 28.82	2023-03-13 04:50:37 - 28.71
2023-03-13 03:43:37 - 28.96	2023-03-13 04:17:37 - 28.8	2023-03-13 04:51:37 - 28.73
2023-03-13 03:44:37 - 29.04	2023-03-13 04:18:37 - 28.65	2023-03-13 04:52:37 - 28.67
2023-03-13 03:45:37 - 28.98	2023-03-13 04:19:37 - 28.89	2023-03-13 04:53:37 - 28.76
2023-03-13 03:46:37 - 28.94	2023-03-13 04:20:37 - 28.65	2023-03-13 04:54:37 - 28.76
2023-03-13 03:47:37 - 29.01	2023-03-13 04:21:37 - 28.78	2023-03-13 04:55:37 - 28.72
2023-03-13 03:48:37 - 28.99	2023-03-13 04:22:37 - 28.78	2023-03-13 04:56:37 - 28.73
2023-03-13 03:49:37 - 28.9	2023-03-13 04:23:37 - 28.78	2023-03-13 04:57:37 - 28.82
2023-03-13 03:50:37 - 28.9	2023-03-13 04:24:37 - 28.73	2023-03-13 04:58:37 - 28.85
2023-03-13 03:51:37 - 28.95	2023-03-13 04:25:37 - 28.66	2023-03-13 04:59:37 - 29.32
2023-03-13 03:52:37 - 28.98	2023-03-13 04:26:37 - 28.77	2023-03-13 05:00:37 - 28.31
2023-03-13 03:53:37 - 28.97	2023-03-13 04:27:37 - 28.72	2023-03-13 05:01:37 - 27.98
2023-03-13 03:54:37 - 29.09	2023-03-13 04:28:37 - 28.78	2023-03-13 05:02:37 - 28.31
2023-03-13 03:55:37 - 29.0	2023-03-13 04:29:37 - 28.76	2023-03-13 05:03:37 - 28.26
2023-03-13 03:56:37 - 28.87	2023-03-13 04:30:37 - 28.72	2023-03-13 05:04:37 - 28.2
2023-03-13 03:57:37 - 28.96	2023-03-13 04:31:37 - 28.76	2023-03-13 05:05:37 - 28.22

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 05:06:37 - 28.16	2023-03-13 05:40:37 - 28.23	2023-03-13 06:14:37 - 28.68
2023-03-13 05:07:37 - 28.25	2023-03-13 05:41:37 - 28.37	2023-03-13 06:15:37 - 28.7
2023-03-13 05:08:37 - 28.26	2023-03-13 05:42:37 - 28.19	2023-03-13 06:16:37 - 28.73
2023-03-13 05:09:37 - 28.25	2023-03-13 05:43:37 - 28.23	2023-03-13 06:17:37 - 28.68
2023-03-13 05:10:37 - 28.18	2023-03-13 05:44:37 - 28.24	2023-03-13 06:18:37 - 28.7
2023-03-13 05:11:37 - 28.24	2023-03-13 05:45:37 - 28.18	2023-03-13 06:19:37 - 28.6
2023-03-13 05:12:37 - 28.21	2023-03-13 05:46:37 - 28.13	2023-03-13 06:20:37 - 28.72
2023-03-13 05:13:37 - 28.28	2023-03-13 05:47:37 - 28.12	2023-03-13 06:21:37 - 28.72
2023-03-13 05:14:37 - 28.24	2023-03-13 05:48:37 - 28.28	2023-03-13 06:22:37 - 28.85
2023-03-13 05:15:37 - 28.26	2023-03-13 05:49:37 - 28.04	2023-03-13 06:23:37 - 28.67
2023-03-13 05:16:37 - 28.2	2023-03-13 05:50:37 - 28.16	2023-03-13 06:24:37 - 28.8
2023-03-13 05:17:37 - 28.24	2023-03-13 05:51:37 - 28.24	2023-03-13 06:25:37 - 28.68
2023-03-13 05:18:37 - 28.27	2023-03-13 05:52:37 - 28.2	2023-03-13 06:26:37 - 28.86
2023-03-13 05:19:37 - 28.25	2023-03-13 05:53:37 - 28.31	2023-03-13 06:27:37 - 28.71
2023-03-13 05:20:37 - 28.27	2023-03-13 05:54:37 - 28.37	2023-03-13 06:28:37 - 28.67
2023-03-13 05:21:37 - 28.25	2023-03-13 05:55:37 - 28.32	2023-03-13 06:29:37 - 28.85
2023-03-13 05:22:37 - 28.25	2023-03-13 05:56:37 - 28.22	2023-03-13 06:30:37 - 28.78
2023-03-13 05:23:37 - 28.22	2023-03-13 05:57:37 - 28.25	2023-03-13 06:31:37 - 28.74
2023-03-13 05:24:37 - 28.24	2023-03-13 05:58:37 - 28.25	2023-03-13 06:32:37 - 28.82
2023-03-13 05:25:37 - 28.24	2023-03-13 05:59:37 - 28.62	2023-03-13 06:33:37 - 28.62
2023-03-13 05:26:37 - 28.22	2023-03-13 06:00:37 - 28.69	2023-03-13 06:34:37 - 28.69
2023-03-13 05:27:37 - 28.27	2023-03-13 06:01:37 - 28.69	2023-03-13 06:35:37 - 28.72
2023-03-13 05:28:37 - 28.23	2023-03-13 06:02:37 - 28.71	2023-03-13 06:36:37 - 28.68
2023-03-13 05:29:37 - 28.23	2023-03-13 06:03:37 - 28.77	2023-03-13 06:37:37 - 28.68
2023-03-13 05:30:37 - 28.2	2023-03-13 06:04:37 - 28.68	2023-03-13 06:38:37 - 28.7
2023-03-13 05:31:37 - 28.33	2023-03-13 06:05:37 - 28.69	2023-03-13 06:39:37 - 28.71
2023-03-13 05:32:37 - 28.19	2023-03-13 06:06:37 - 28.71	2023-03-13 06:40:37 - 28.75
2023-03-13 05:33:37 - 28.27	2023-03-13 06:07:37 - 28.74	2023-03-13 06:41:37 - 28.78
2023-03-13 05:34:37 - 28.23	2023-03-13 06:08:37 - 28.7	2023-03-13 06:42:37 - 28.71
2023-03-13 05:35:37 - 28.2	2023-03-13 06:09:37 - 28.74	2023-03-13 06:43:37 - 28.63
2023-03-13 05:36:37 - 28.25	2023-03-13 06:10:37 - 28.73	2023-03-13 06:44:37 - 28.71
2023-03-13 05:37:37 - 28.26	2023-03-13 06:11:37 - 28.75	2023-03-13 06:45:37 - 28.69
2023-03-13 05:38:37 - 28.27	2023-03-13 06:12:37 - 28.61	2023-03-13 06:46:37 - 28.71
2023-03-13 05:39:37 - 28.28	2023-03-13 06:13:37 - 28.72	2023-03-13 06:47:37 - 28.78

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 06:48:37 - 28.74	2023-03-13 07:22:37 - 27.09	2023-03-13 07:56:37 - 27.01
2023-03-13 06:49:37 - 28.7	2023-03-13 07:23:37 - 26.92	2023-03-13 07:57:37 - 27.01
2023-03-13 06:50:37 - 28.71	2023-03-13 07:24:37 - 26.93	2023-03-13 07:58:37 - 27.04
2023-03-13 06:51:37 - 28.69	2023-03-13 07:25:37 - 26.99	2023-03-13 07:59:37 - 26.44
2023-03-13 06:52:37 - 28.75	2023-03-13 07:26:37 - 27.05	2023-03-13 08:00:37 - 24.77
2023-03-13 06:53:37 - 28.7	2023-03-13 07:27:37 - 27.04	2023-03-13 08:01:37 - 24.74
2023-03-13 06:54:37 - 28.68	2023-03-13 07:28:37 - 26.99	2023-03-13 08:02:37 - 24.77
2023-03-13 06:55:37 - 28.73	2023-03-13 07:29:37 - 27.0	2023-03-13 08:03:37 - 24.79
2023-03-13 06:56:37 - 28.68	2023-03-13 07:30:37 - 26.95	2023-03-13 08:04:37 - 24.69
2023-03-13 06:57:37 - 28.66	2023-03-13 07:31:37 - 27.04	2023-03-13 08:05:37 - 24.84
2023-03-13 06:58:37 - 28.7	2023-03-13 07:32:37 - 27.06	2023-03-13 08:06:37 - 24.75
2023-03-13 06:59:37 - 28.42	2023-03-13 07:33:37 - 26.91	2023-03-13 08:07:37 - 24.72
2023-03-13 07:00:37 - 26.89	2023-03-13 07:34:37 - 27.05	2023-03-13 08:08:37 - 24.7
2023-03-13 07:01:37 - 27.05	2023-03-13 07:35:37 - 27.1	2023-03-13 08:09:37 - 24.7
2023-03-13 07:02:37 - 26.99	2023-03-13 07:36:37 - 26.97	2023-03-13 08:10:37 - 24.76
2023-03-13 07:03:37 - 27.01	2023-03-13 07:37:37 - 27.08	2023-03-13 08:11:37 - 24.81
2023-03-13 07:04:37 - 27.09	2023-03-13 07:38:37 - 26.99	2023-03-13 08:12:37 - 24.77
2023-03-13 07:05:37 - 27.01	2023-03-13 07:39:37 - 27.0	2023-03-13 08:13:37 - 24.74
2023-03-13 07:06:37 - 26.99	2023-03-13 07:40:37 - 26.96	2023-03-13 08:14:37 - 24.73
2023-03-13 07:07:37 - 26.99	2023-03-13 07:41:37 - 26.96	2023-03-13 08:15:37 - 24.73
2023-03-13 07:08:37 - 27.01	2023-03-13 07:42:37 - 26.99	2023-03-13 08:16:37 - 24.77
2023-03-13 07:09:37 - 27.03	2023-03-13 07:43:37 - 26.98	2023-03-13 08:17:37 - 24.69
2023-03-13 07:10:37 - 27.0	2023-03-13 07:44:37 - 26.93	2023-03-13 08:18:37 - 24.94
2023-03-13 07:11:37 - 27.0	2023-03-13 07:45:37 - 27.01	2023-03-13 08:19:37 - 24.85
2023-03-13 07:12:37 - 27.17	2023-03-13 07:46:37 - 26.98	2023-03-13 08:20:37 - 24.84
2023-03-13 07:13:37 - 27.05	2023-03-13 07:47:37 - 27.08	2023-03-13 08:21:37 - 24.62
2023-03-13 07:14:37 - 26.95	2023-03-13 07:48:37 - 26.98	2023-03-13 08:22:37 - 24.71
2023-03-13 07:15:37 - 27.0	2023-03-13 07:49:37 - 27.03	2023-03-13 08:23:37 - 24.9
2023-03-13 07:16:37 - 27.0	2023-03-13 07:50:37 - 26.99	2023-03-13 08:24:37 - 24.68
2023-03-13 07:17:37 - 27.08	2023-03-13 07:51:37 - 27.04	2023-03-13 08:25:37 - 24.72
2023-03-13 07:18:37 - 27.05	2023-03-13 07:52:37 - 27.06	2023-03-13 08:26:37 - 24.73
2023-03-13 07:19:37 - 27.1	2023-03-13 07:53:37 - 26.97	2023-03-13 08:27:37 - 24.72
2023-03-13 07:20:37 - 27.0	2023-03-13 07:54:37 - 27.01	2023-03-13 08:28:37 - 24.76
2023-03-13 07:21:37 - 26.97	2023-03-13 07:55:37 - 26.97	2023-03-13 08:29:37 - 24.74

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 08:30:37 - 24.76	2023-03-13 09:04:37 - 26.53	2023-03-13 09:38:37 - 26.55
2023-03-13 08:31:37 - 24.71	2023-03-13 09:05:37 - 26.49	2023-03-13 09:39:37 - 26.45
2023-03-13 08:32:37 - 24.79	2023-03-13 09:06:37 - 26.48	2023-03-13 09:40:37 - 26.56
2023-03-13 08:33:37 - 24.77	2023-03-13 09:07:37 - 26.5	2023-03-13 09:41:37 - 26.57
2023-03-13 08:34:37 - 24.74	2023-03-13 09:08:37 - 26.52	2023-03-13 09:42:37 - 26.58
2023-03-13 08:35:37 - 24.72	2023-03-13 09:09:37 - 26.6	2023-03-13 09:43:37 - 26.54
2023-03-13 08:36:37 - 24.84	2023-03-13 09:10:37 - 26.47	2023-03-13 09:44:37 - 26.56
2023-03-13 08:37:37 - 24.55	2023-03-13 09:11:37 - 26.52	2023-03-13 09:45:37 - 26.49
2023-03-13 08:38:37 - 24.85	2023-03-13 09:12:37 - 26.74	2023-03-13 09:46:37 - 26.52
2023-03-13 08:39:37 - 24.76	2023-03-13 09:13:37 - 26.65	2023-03-13 09:47:37 - 26.43
2023-03-13 08:40:37 - 24.79	2023-03-13 09:14:37 - 26.45	2023-03-13 09:48:37 - 26.57
2023-03-13 08:41:37 - 24.76	2023-03-13 09:15:37 - 26.6	2023-03-13 09:49:37 - 26.55
2023-03-13 08:42:37 - 24.72	2023-03-13 09:16:37 - 26.58	2023-03-13 09:50:37 - 26.56
2023-03-13 08:43:37 - 24.74	2023-03-13 09:17:37 - 26.65	2023-03-13 09:51:37 - 26.54
2023-03-13 08:44:37 - 24.72	2023-03-13 09:18:37 - 26.57	2023-03-13 09:52:37 - 26.61
2023-03-13 08:45:37 - 24.78	2023-03-13 09:19:37 - 26.53	2023-03-13 09:53:37 - 26.62
2023-03-13 08:46:37 - 24.74	2023-03-13 09:20:37 - 26.53	2023-03-13 09:54:37 - 26.39
2023-03-13 08:47:37 - 24.76	2023-03-13 09:21:37 - 26.52	2023-03-13 09:55:37 - 26.45
2023-03-13 08:48:37 - 24.82	2023-03-13 09:22:37 - 26.61	2023-03-13 09:56:37 - 26.73
2023-03-13 08:49:37 - 24.74	2023-03-13 09:23:37 - 26.53	2023-03-13 09:57:37 - 26.52
2023-03-13 08:50:37 - 24.65	2023-03-13 09:24:37 - 26.6	2023-03-13 09:58:37 - 26.49
2023-03-13 08:51:37 - 24.72	2023-03-13 09:25:37 - 26.52	2023-03-13 09:59:37 - 26.51
2023-03-13 08:52:37 - 24.71	2023-03-13 09:26:37 - 26.53	2023-03-13 10:00:37 - 27.12
2023-03-13 08:53:37 - 24.76	2023-03-13 09:27:37 - 26.54	2023-03-13 10:01:37 - 27.22
2023-03-13 08:54:37 - 24.88	2023-03-13 09:28:37 - 26.54	2023-03-13 10:02:37 - 27.18
2023-03-13 08:55:37 - 24.83	2023-03-13 09:29:37 - 26.58	2023-03-13 10:03:37 - 27.0
2023-03-13 08:56:37 - 24.79	2023-03-13 09:30:37 - 26.58	2023-03-13 10:04:37 - 27.16
2023-03-13 08:57:37 - 24.61	2023-03-13 09:31:37 - 26.56	2023-03-13 10:05:37 - 27.13
2023-03-13 08:58:37 - 24.83	2023-03-13 09:32:37 - 26.71	2023-03-13 10:06:37 - 27.16
2023-03-13 08:59:37 - 24.53	2023-03-13 09:33:37 - 26.49	2023-03-13 10:07:37 - 27.19
2023-03-13 09:00:37 - 26.56	2023-03-13 09:34:37 - 26.6	2023-03-13 10:08:37 - 27.08
2023-03-13 09:01:37 - 26.58	2023-03-13 09:35:37 - 26.52	2023-03-13 10:09:37 - 27.07
2023-03-13 09:02:37 - 26.57	2023-03-13 09:36:37 - 26.56	2023-03-13 10:10:37 - 27.19
2023-03-13 09:03:37 - 26.55	2023-03-13 09:37:37 - 26.54	2023-03-13 10:11:37 - 27.1

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 10:12:37 - 26.99	2023-03-13 10:46:37 - 27.16	2023-03-13 11:20:37 - 26.19
2023-03-13 10:13:37 - 27.16	2023-03-13 10:47:37 - 27.18	2023-03-13 11:21:37 - 26.18
2023-03-13 10:14:37 - 27.24	2023-03-13 10:48:37 - 27.05	2023-03-13 11:22:37 - 26.25
2023-03-13 10:15:37 - 27.15	2023-03-13 10:49:37 - 27.19	2023-03-13 11:23:37 - 26.22
2023-03-13 10:16:37 - 27.24	2023-03-13 10:50:37 - 27.19	2023-03-13 11:24:37 - 26.21
2023-03-13 10:17:37 - 27.18	2023-03-13 10:51:37 - 27.17	2023-03-13 11:25:37 - 26.2
2023-03-13 10:18:37 - 27.13	2023-03-13 10:52:37 - 27.19	2023-03-13 11:26:37 - 26.23
2023-03-13 10:19:37 - 27.14	2023-03-13 10:53:37 - 27.17	2023-03-13 11:27:37 - 26.27
2023-03-13 10:20:37 - 27.16	2023-03-13 10:54:37 - 27.13	2023-03-13 11:28:37 - 26.19
2023-03-13 10:21:37 - 27.17	2023-03-13 10:55:37 - 27.13	2023-03-13 11:29:37 - 26.25
2023-03-13 10:22:37 - 27.14	2023-03-13 10:56:37 - 27.21	2023-03-13 11:30:37 - 26.28
2023-03-13 10:23:37 - 27.22	2023-03-13 10:57:37 - 27.16	2023-03-13 11:31:37 - 26.2
2023-03-13 10:24:37 - 27.16	2023-03-13 10:58:37 - 27.15	2023-03-13 11:32:37 - 26.27
2023-03-13 10:25:37 - 27.13	2023-03-13 10:59:37 - 27.41	2023-03-13 11:33:37 - 26.2
2023-03-13 10:26:37 - 27.18	2023-03-13 11:00:37 - 26.23	2023-03-13 11:34:37 - 26.21
2023-03-13 10:27:37 - 27.14	2023-03-13 11:01:37 - 26.23	2023-03-13 11:35:37 - 26.28
2023-03-13 10:28:37 - 27.2	2023-03-13 11:02:37 - 26.23	2023-03-13 11:36:37 - 26.21
2023-03-13 10:29:37 - 27.13	2023-03-13 11:03:37 - 26.17	2023-03-13 11:37:37 - 26.34
2023-03-13 10:30:37 - 27.17	2023-03-13 11:04:37 - 26.23	2023-03-13 11:38:37 - 26.21
2023-03-13 10:31:37 - 27.05	2023-03-13 11:05:37 - 26.27	2023-03-13 11:39:37 - 26.22
2023-03-13 10:32:37 - 27.28	2023-03-13 11:06:37 - 26.18	2023-03-13 11:40:37 - 26.14
2023-03-13 10:33:37 - 27.15	2023-03-13 11:07:37 - 26.28	2023-03-13 11:41:37 - 26.21
2023-03-13 10:34:37 - 27.15	2023-03-13 11:08:37 - 26.22	2023-03-13 11:42:37 - 26.18
2023-03-13 10:35:37 - 27.17	2023-03-13 11:09:37 - 26.12	2023-03-13 11:43:37 - 26.19
2023-03-13 10:36:37 - 27.13	2023-03-13 11:10:37 - 26.17	2023-03-13 11:44:37 - 26.21
2023-03-13 10:37:37 - 27.15	2023-03-13 11:11:37 - 26.25	2023-03-13 11:45:37 - 26.23
2023-03-13 10:38:37 - 27.21	2023-03-13 11:12:37 - 26.42	2023-03-13 11:46:37 - 26.17
2023-03-13 10:39:37 - 27.18	2023-03-13 11:13:37 - 26.25	2023-03-13 11:47:37 - 26.21
2023-03-13 10:40:37 - 27.22	2023-03-13 11:14:37 - 26.2	2023-03-13 11:48:37 - 26.36
2023-03-13 10:41:37 - 27.18	2023-03-13 11:15:37 - 26.01	2023-03-13 11:49:37 - 26.19
2023-03-13 10:42:37 - 27.1	2023-03-13 11:16:37 - 26.22	2023-03-13 11:50:37 - 26.3
2023-03-13 10:43:37 - 27.16	2023-03-13 11:17:37 - 26.2	2023-03-13 11:51:37 - 26.21
2023-03-13 10:44:37 - 27.14	2023-03-13 11:18:37 - 26.24	2023-03-13 11:52:37 - 26.23
2023-03-13 10:45:37 - 27.19	2023-03-13 11:19:37 - 26.21	2023-03-13 11:53:37 - 26.22

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 11:54:37 - 26.22	2023-03-13 12:28:37 - 28.07	2023-03-13 13:02:37 - 28.44
2023-03-13 11:55:37 - 26.16	2023-03-13 12:29:37 - 27.96	2023-03-13 13:03:37 - 28.32
2023-03-13 11:56:37 - 26.1	2023-03-13 12:30:37 - 28.05	2023-03-13 13:04:37 - 28.42
2023-03-13 11:57:37 - 26.19	2023-03-13 12:31:37 - 28.1	2023-03-13 13:05:37 - 28.34
2023-03-13 11:58:37 - 26.19	2023-03-13 12:32:37 - 28.04	2023-03-13 13:06:37 - 28.37
2023-03-13 11:59:37 - 25.77	2023-03-13 12:33:37 - 27.92	2023-03-13 13:07:37 - 28.41
2023-03-13 12:00:37 - 27.99	2023-03-13 12:34:37 - 27.97	2023-03-13 13:08:37 - 28.55
2023-03-13 12:01:37 - 28.03	2023-03-13 12:35:37 - 27.94	2023-03-13 13:09:37 - 28.36
2023-03-13 12:02:37 - 28.19	2023-03-13 12:36:37 - 27.88	2023-03-13 13:10:37 - 28.35
2023-03-13 12:03:37 - 27.97	2023-03-13 12:37:37 - 27.98	2023-03-13 13:11:37 - 28.39
2023-03-13 12:04:37 - 28.01	2023-03-13 12:38:37 - 27.94	2023-03-13 13:12:37 - 28.39
2023-03-13 12:05:37 - 27.99	2023-03-13 12:39:37 - 28.04	2023-03-13 13:13:37 - 28.36
2023-03-13 12:06:37 - 28.0	2023-03-13 12:40:37 - 27.91	2023-03-13 13:14:37 - 28.48
2023-03-13 12:07:37 - 27.97	2023-03-13 12:41:37 - 28.02	2023-03-13 13:15:37 - 28.38
2023-03-13 12:08:37 - 28.01	2023-03-13 12:42:37 - 28.02	2023-03-13 13:16:37 - 28.38
2023-03-13 12:09:37 - 28.03	2023-03-13 12:43:37 - 28.02	2023-03-13 13:17:37 - 28.44
2023-03-13 12:10:37 - 27.99	2023-03-13 12:44:37 - 28.07	2023-03-13 13:18:37 - 28.39
2023-03-13 12:11:37 - 27.97	2023-03-13 12:45:37 - 28.0	2023-03-13 13:19:37 - 28.39
2023-03-13 12:12:37 - 28.05	2023-03-13 12:46:37 - 27.98	2023-03-13 13:20:37 - 28.39
2023-03-13 12:13:37 - 28.14	2023-03-13 12:47:37 - 28.03	2023-03-13 13:21:37 - 28.37
2023-03-13 12:14:37 - 28.08	2023-03-13 12:48:37 - 27.98	2023-03-13 13:22:37 - 28.4
2023-03-13 12:15:37 - 28.05	2023-03-13 12:49:37 - 28.01	2023-03-13 13:23:37 - 28.39
2023-03-13 12:16:37 - 28.02	2023-03-13 12:50:37 - 28.03	2023-03-13 13:24:37 - 28.42
2023-03-13 12:17:37 - 28.0	2023-03-13 12:51:37 - 28.05	2023-03-13 13:25:37 - 28.37
2023-03-13 12:18:37 - 28.01	2023-03-13 12:52:37 - 27.94	2023-03-13 13:26:37 - 28.37
2023-03-13 12:19:37 - 28.22	2023-03-13 12:53:37 - 27.98	2023-03-13 13:27:37 - 28.38
2023-03-13 12:20:37 - 28.02	2023-03-13 12:54:37 - 28.11	2023-03-13 13:28:37 - 28.35
2023-03-13 12:21:37 - 28.04	2023-03-13 12:55:37 - 28.05	2023-03-13 13:29:37 - 28.38
2023-03-13 12:22:37 - 28.03	2023-03-13 12:56:37 - 28.06	2023-03-13 13:30:37 - 28.38
2023-03-13 12:23:37 - 28.09	2023-03-13 12:57:37 - 27.75	2023-03-13 13:31:37 - 28.48
2023-03-13 12:24:37 - 27.94	2023-03-13 12:58:37 - 27.89	2023-03-13 13:32:37 - 28.41
2023-03-13 12:25:37 - 27.94	2023-03-13 12:59:37 - 27.46	2023-03-13 13:33:37 - 28.37
2023-03-13 12:26:37 - 28.01	2023-03-13 13:00:37 - 28.37	2023-03-13 13:34:37 - 28.39
2023-03-13 12:27:37 - 28.0	2023-03-13 13:01:37 - 28.45	2023-03-13 13:35:37 - 28.53

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 13:36:37 - 28.39	2023-03-13 14:10:37 - 26.66	2023-03-13 14:44:37 - 26.66
2023-03-13 13:37:37 - 28.47	2023-03-13 14:11:37 - 26.69	2023-03-13 14:45:37 - 26.69
2023-03-13 13:38:37 - 28.4	2023-03-13 14:12:37 - 26.61	2023-03-13 14:46:37 - 26.59
2023-03-13 13:39:37 - 28.33	2023-03-13 14:13:37 - 26.7	2023-03-13 14:47:37 - 26.53
2023-03-13 13:40:37 - 28.4	2023-03-13 14:14:37 - 26.66	2023-03-13 14:48:37 - 26.7
2023-03-13 13:41:37 - 28.42	2023-03-13 14:15:37 - 26.69	2023-03-13 14:49:37 - 26.75
2023-03-13 13:42:37 - 28.21	2023-03-13 14:16:37 - 26.72	2023-03-13 14:50:37 - 26.7
2023-03-13 13:43:37 - 28.29	2023-03-13 14:17:37 - 26.73	2023-03-13 14:51:37 - 26.66
2023-03-13 13:44:37 - 28.48	2023-03-13 14:18:37 - 26.73	2023-03-13 14:52:37 - 26.75
2023-03-13 13:45:37 - 28.38	2023-03-13 14:19:37 - 26.69	2023-03-13 14:53:37 - 26.49
2023-03-13 13:46:37 - 28.37	2023-03-13 14:20:37 - 26.76	2023-03-13 14:54:37 - 26.72
2023-03-13 13:47:37 - 28.35	2023-03-13 14:21:37 - 26.68	2023-03-13 14:55:37 - 26.65
2023-03-13 13:48:37 - 28.41	2023-03-13 14:22:37 - 26.7	2023-03-13 14:56:37 - 26.67
2023-03-13 13:49:37 - 28.34	2023-03-13 14:23:37 - 26.66	2023-03-13 14:57:37 - 26.7
2023-03-13 13:50:37 - 28.35	2023-03-13 14:24:37 - 26.84	2023-03-13 14:58:37 - 26.71
2023-03-13 13:51:37 - 28.2	2023-03-13 14:25:37 - 26.69	2023-03-13 14:59:37 - 26.55
2023-03-13 13:52:37 - 28.36	2023-03-13 14:26:37 - 26.66	2023-03-13 15:00:37 - 23.4
2023-03-13 13:53:37 - 28.39	2023-03-13 14:27:37 - 26.69	2023-03-13 15:01:37 - 23.42
2023-03-13 13:54:37 - 28.3	2023-03-13 14:28:37 - 26.67	2023-03-13 15:02:37 - 23.45
2023-03-13 13:55:37 - 28.36	2023-03-13 14:29:37 - 26.69	2023-03-13 15:03:37 - 23.36
2023-03-13 13:56:37 - 28.39	2023-03-13 14:30:37 - 26.6	2023-03-13 15:04:37 - 23.5
2023-03-13 13:57:37 - 28.35	2023-03-13 14:31:37 - 26.69	2023-03-13 15:05:37 - 23.41
2023-03-13 13:58:37 - 28.48	2023-03-13 14:32:37 - 26.87	2023-03-13 15:06:37 - 23.36
2023-03-13 13:59:37 - 28.6	2023-03-13 14:33:37 - 26.85	2023-03-13 15:07:37 - 23.42
2023-03-13 14:00:37 - 26.65	2023-03-13 14:34:37 - 26.71	2023-03-13 15:08:37 - 23.42
2023-03-13 14:01:37 - 26.64	2023-03-13 14:35:37 - 26.7	2023-03-13 15:09:37 - 23.5
2023-03-13 14:02:37 - 26.7	2023-03-13 14:36:37 - 26.69	2023-03-13 15:10:37 - 23.49
2023-03-13 14:03:37 - 26.69	2023-03-13 14:37:37 - 26.68	2023-03-13 15:11:37 - 23.38
2023-03-13 14:04:37 - 26.65	2023-03-13 14:38:37 - 26.73	2023-03-13 15:12:37 - 23.46
2023-03-13 14:05:37 - 26.69	2023-03-13 14:39:37 - 26.78	2023-03-13 15:13:37 - 23.5
2023-03-13 14:06:37 - 26.66	2023-03-13 14:40:37 - 26.66	2023-03-13 15:14:37 - 23.4
2023-03-13 14:07:37 - 26.81	2023-03-13 14:41:37 - 26.64	2023-03-13 15:15:37 - 23.48
2023-03-13 14:08:37 - 26.79	2023-03-13 14:42:37 - 26.69	2023-03-13 15:16:37 - 23.42
2023-03-13 14:09:37 - 26.66	2023-03-13 14:43:37 - 26.74	2023-03-13 15:17:37 - 23.36

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 15:18:37 - 23.38	2023-03-13 15:52:37 - 23.45	2023-03-13 16:26:37 - 24.31
2023-03-13 15:19:37 - 23.43	2023-03-13 15:53:37 - 23.36	2023-03-13 16:27:37 - 24.17
2023-03-13 15:20:37 - 23.57	2023-03-13 15:54:37 - 23.43	2023-03-13 16:28:37 - 24.35
2023-03-13 15:21:37 - 23.44	2023-03-13 15:55:37 - 23.43	2023-03-13 16:29:37 - 24.29
2023-03-13 15:22:37 - 23.39	2023-03-13 15:56:37 - 23.36	2023-03-13 16:30:37 - 24.33
2023-03-13 15:23:37 - 23.48	2023-03-13 15:57:37 - 23.43	2023-03-13 16:31:37 - 24.29
2023-03-13 15:24:37 - 23.43	2023-03-13 15:58:37 - 23.39	2023-03-13 16:32:37 - 24.36
2023-03-13 15:25:37 - 23.4	2023-03-13 15:59:37 - 23.18	2023-03-13 16:33:37 - 24.3
2023-03-13 15:26:37 - 23.44	2023-03-13 16:00:37 - 24.35	2023-03-13 16:34:37 - 24.35
2023-03-13 15:27:37 - 23.41	2023-03-13 16:01:37 - 24.45	2023-03-13 16:35:37 - 24.34
2023-03-13 15:28:37 - 23.44	2023-03-13 16:02:37 - 24.38	2023-03-13 16:36:37 - 24.4
2023-03-13 15:29:37 - 23.36	2023-03-13 16:03:37 - 24.34	2023-03-13 16:37:37 - 24.36
2023-03-13 15:30:37 - 23.51	2023-03-13 16:04:37 - 24.41	2023-03-13 16:38:37 - 24.41
2023-03-13 15:31:37 - 23.28	2023-03-13 16:05:37 - 24.33	2023-03-13 16:39:37 - 24.21
2023-03-13 15:32:37 - 23.36	2023-03-13 16:06:37 - 24.35	2023-03-13 16:40:37 - 24.36
2023-03-13 15:33:37 - 23.42	2023-03-13 16:07:37 - 24.35	2023-03-13 16:41:37 - 24.37
2023-03-13 15:34:37 - 23.41	2023-03-13 16:08:37 - 24.38	2023-03-13 16:42:37 - 24.37
2023-03-13 15:35:37 - 23.38	2023-03-13 16:09:37 - 24.45	2023-03-13 16:43:37 - 24.41
2023-03-13 15:36:37 - 23.45	2023-03-13 16:10:37 - 24.5	2023-03-13 16:44:37 - 24.43
2023-03-13 15:37:37 - 23.43	2023-03-13 16:11:37 - 24.28	2023-03-13 16:45:37 - 24.3
2023-03-13 15:38:37 - 23.39	2023-03-13 16:12:37 - 24.27	2023-03-13 16:46:37 - 24.29
2023-03-13 15:39:37 - 23.39	2023-03-13 16:13:37 - 24.18	2023-03-13 16:47:37 - 24.33
2023-03-13 15:40:37 - 23.16	2023-03-13 16:14:37 - 24.25	2023-03-13 16:48:37 - 24.4
2023-03-13 15:41:37 - 23.39	2023-03-13 16:15:37 - 24.26	2023-03-13 16:49:37 - 24.38
2023-03-13 15:42:37 - 23.35	2023-03-13 16:16:37 - 24.2	2023-03-13 16:50:37 - 24.33
2023-03-13 15:43:37 - 23.39	2023-03-13 16:17:37 - 24.32	2023-03-13 16:51:37 - 24.48
2023-03-13 15:44:37 - 23.4	2023-03-13 16:18:37 - 24.31	2023-03-13 16:52:37 - 24.34
2023-03-13 15:45:37 - 23.39	2023-03-13 16:19:37 - 24.35	2023-03-13 16:53:37 - 24.33
2023-03-13 15:46:37 - 23.53	2023-03-13 16:20:37 - 24.33	2023-03-13 16:54:37 - 24.29
2023-03-13 15:47:37 - 23.44	2023-03-13 16:21:37 - 24.36	2023-03-13 16:55:37 - 24.29
2023-03-13 15:48:37 - 23.33	2023-03-13 16:22:37 - 24.33	2023-03-13 16:56:37 - 24.32
2023-03-13 15:49:37 - 23.34	2023-03-13 16:23:37 - 24.36	2023-03-13 16:57:37 - 24.36
2023-03-13 15:50:37 - 23.53	2023-03-13 16:24:37 - 24.34	2023-03-13 16:58:37 - 24.33
2023-03-13 15:51:37 - 23.39	2023-03-13 16:25:37 - 24.42	2023-03-13 16:59:37 - 24.37

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 17:00:37 - 28.66	2023-03-13 17:34:37 - 28.6	2023-03-13 18:08:37 - 26.62
2023-03-13 17:01:37 - 28.63	2023-03-13 17:35:37 - 28.71	2023-03-13 18:09:37 - 26.54
2023-03-13 17:02:37 - 28.63	2023-03-13 17:36:37 - 28.59	2023-03-13 18:10:37 - 26.65
2023-03-13 17:03:37 - 28.57	2023-03-13 17:37:37 - 28.62	2023-03-13 18:11:37 - 26.66
2023-03-13 17:04:37 - 28.6	2023-03-13 17:38:37 - 28.64	2023-03-13 18:12:37 - 26.73
2023-03-13 17:05:37 - 28.57	2023-03-13 17:39:37 - 28.63	2023-03-13 18:13:37 - 26.65
2023-03-13 17:06:37 - 28.68	2023-03-13 17:40:37 - 28.65	2023-03-13 18:14:37 - 26.74
2023-03-13 17:07:37 - 28.73	2023-03-13 17:41:37 - 28.59	2023-03-13 18:15:37 - 26.66
2023-03-13 17:08:37 - 28.62	2023-03-13 17:42:37 - 28.72	2023-03-13 18:16:37 - 26.53
2023-03-13 17:09:37 - 28.63	2023-03-13 17:43:37 - 28.62	2023-03-13 18:17:37 - 26.69
2023-03-13 17:10:37 - 28.6	2023-03-13 17:44:37 - 28.65	2023-03-13 18:18:37 - 26.69
2023-03-13 17:11:37 - 28.77	2023-03-13 17:45:37 - 28.67	2023-03-13 18:19:37 - 26.64
2023-03-13 17:12:37 - 28.72	2023-03-13 17:46:37 - 28.66	2023-03-13 18:20:37 - 26.74
2023-03-13 17:13:37 - 28.64	2023-03-13 17:47:37 - 28.55	2023-03-13 18:21:37 - 26.66
2023-03-13 17:14:37 - 28.64	2023-03-13 17:48:37 - 28.6	2023-03-13 18:22:37 - 26.78
2023-03-13 17:15:37 - 28.63	2023-03-13 17:49:37 - 28.6	2023-03-13 18:23:37 - 26.6
2023-03-13 17:16:37 - 28.64	2023-03-13 17:50:37 - 28.73	2023-03-13 18:24:37 - 26.65
2023-03-13 17:17:37 - 28.68	2023-03-13 17:51:37 - 28.61	2023-03-13 18:25:37 - 26.55
2023-03-13 17:18:37 - 28.6	2023-03-13 17:52:37 - 28.59	2023-03-13 18:26:37 - 26.63
2023-03-13 17:19:37 - 28.62	2023-03-13 17:53:37 - 28.63	2023-03-13 18:27:37 - 26.7
2023-03-13 17:20:37 - 28.68	2023-03-13 17:54:37 - 28.66	2023-03-13 18:28:37 - 26.64
2023-03-13 17:21:37 - 28.56	2023-03-13 17:55:37 - 28.59	2023-03-13 18:29:37 - 26.69
2023-03-13 17:22:37 - 28.57	2023-03-13 17:56:37 - 28.7	2023-03-13 18:30:37 - 26.66
2023-03-13 17:23:37 - 28.65	2023-03-13 17:57:37 - 28.6	2023-03-13 18:31:37 - 26.68
2023-03-13 17:24:37 - 28.63	2023-03-13 17:58:37 - 28.63	2023-03-13 18:32:37 - 26.51
2023-03-13 17:25:37 - 28.61	2023-03-13 17:59:37 - 28.29	2023-03-13 18:33:37 - 26.73
2023-03-13 17:26:37 - 28.7	2023-03-13 18:00:37 - 26.69	2023-03-13 18:34:37 - 26.64
2023-03-13 17:27:37 - 28.72	2023-03-13 18:01:37 - 26.71	2023-03-13 18:35:37 - 26.65
2023-03-13 17:28:37 - 28.61	2023-03-13 18:02:37 - 26.65	2023-03-13 18:36:37 - 26.6
2023-03-13 17:29:37 - 28.57	2023-03-13 18:03:37 - 26.67	2023-03-13 18:37:37 - 26.64
2023-03-13 17:30:37 - 28.53	2023-03-13 18:04:37 - 26.63	2023-03-13 18:38:37 - 26.54
2023-03-13 17:31:37 - 28.64	2023-03-13 18:05:37 - 26.76	2023-03-13 18:39:37 - 26.67
2023-03-13 17:32:37 - 28.62	2023-03-13 18:06:37 - 26.77	2023-03-13 18:40:37 - 26.57
2023-03-13 17:33:37 - 28.72	2023-03-13 18:07:37 - 26.69	2023-03-13 18:41:37 - 26.76

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 18:42:37 - 26.7	2023-03-13 19:16:37 - 29.15	2023-03-13 19:50:37 - 29.12
2023-03-13 18:43:37 - 26.72	2023-03-13 19:17:37 - 29.23	2023-03-13 19:51:37 - 29.17
2023-03-13 18:44:37 - 26.68	2023-03-13 19:18:37 - 29.22	2023-03-13 19:52:37 - 29.26
2023-03-13 18:45:37 - 26.69	2023-03-13 19:19:37 - 29.23	2023-03-13 19:53:37 - 29.22
2023-03-13 18:46:37 - 26.68	2023-03-13 19:20:37 - 29.28	2023-03-13 19:54:37 - 29.25
2023-03-13 18:47:37 - 26.64	2023-03-13 19:21:37 - 29.22	2023-03-13 19:55:37 - 29.31
2023-03-13 18:48:37 - 26.67	2023-03-13 19:22:37 - 29.22	2023-03-13 19:56:37 - 29.21
2023-03-13 18:49:37 - 26.7	2023-03-13 19:23:37 - 29.25	2023-03-13 19:57:37 - 29.23
2023-03-13 18:50:37 - 26.69	2023-03-13 19:24:37 - 29.2	2023-03-13 19:58:37 - 29.24
2023-03-13 18:51:37 - 26.66	2023-03-13 19:25:37 - 29.27	2023-03-13 19:59:37 - 29.16
2023-03-13 18:52:37 - 26.66	2023-03-13 19:26:37 - 29.34	2023-03-13 20:00:37 - 29.06
2023-03-13 18:53:37 - 26.66	2023-03-13 19:27:37 - 29.2	2023-03-13 20:01:37 - 29.1
2023-03-13 18:54:37 - 26.67	2023-03-13 19:28:37 - 29.31	2023-03-13 20:02:37 - 29.14
2023-03-13 18:55:37 - 26.45	2023-03-13 19:29:37 - 29.24	2023-03-13 20:03:37 - 29.09
2023-03-13 18:56:37 - 26.64	2023-03-13 19:30:37 - 29.24	2023-03-13 20:04:37 - 29.07
2023-03-13 18:57:37 - 26.73	2023-03-13 19:31:37 - 29.24	2023-03-13 20:05:37 - 29.15
2023-03-13 18:58:37 - 26.65	2023-03-13 19:32:37 - 29.19	2023-03-13 20:06:37 - 29.06
2023-03-13 18:59:37 - 26.69	2023-03-13 19:33:37 - 29.17	2023-03-13 20:07:37 - 29.08
2023-03-13 19:00:37 - 29.25	2023-03-13 19:34:37 - 29.03	2023-03-13 20:08:37 - 29.07
2023-03-13 19:01:37 - 29.17	2023-03-13 19:35:37 - 29.34	2023-03-13 20:09:37 - 29.07
2023-03-13 19:02:37 - 29.3	2023-03-13 19:36:37 - 29.2	2023-03-13 20:10:37 - 29.04
2023-03-13 19:03:37 - 29.23	2023-03-13 19:37:37 - 29.32	2023-03-13 20:11:37 - 28.99
2023-03-13 19:04:37 - 29.06	2023-03-13 19:38:37 - 29.25	2023-03-13 20:12:37 - 29.07
2023-03-13 19:05:37 - 29.21	2023-03-13 19:39:37 - 29.33	2023-03-13 20:13:37 - 29.16
2023-03-13 19:06:37 - 29.19	2023-03-13 19:40:37 - 29.23	2023-03-13 20:14:37 - 29.14
2023-03-13 19:07:37 - 29.22	2023-03-13 19:41:37 - 29.18	2023-03-13 20:15:37 - 29.05
2023-03-13 19:08:37 - 29.11	2023-03-13 19:42:37 - 29.28	2023-03-13 20:16:37 - 29.06
2023-03-13 19:09:37 - 29.21	2023-03-13 19:43:37 - 29.21	2023-03-13 20:17:37 - 29.06
2023-03-13 19:10:37 - 29.24	2023-03-13 19:44:37 - 29.13	2023-03-13 20:18:37 - 29.15
2023-03-13 19:11:37 - 29.12	2023-03-13 19:45:37 - 29.23	2023-03-13 20:19:37 - 29.03
2023-03-13 19:12:37 - 29.27	2023-03-13 19:46:37 - 29.18	2023-03-13 20:20:37 - 29.09
2023-03-13 19:13:37 - 29.22	2023-03-13 19:47:37 - 29.2	2023-03-13 20:21:37 - 29.17
2023-03-13 19:14:37 - 29.18	2023-03-13 19:48:37 - 29.23	2023-03-13 20:22:37 - 29.1
2023-03-13 19:15:37 - 29.21	2023-03-13 19:49:37 - 29.3	2023-03-13 20:23:37 - 29.08

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 20:24:37 - 29.14	2023-03-13 20:58:37 - 29.12	2023-03-13 21:32:37 - 28.62
2023-03-13 20:25:37 - 29.14	2023-03-13 20:59:37 - 29.15	2023-03-13 21:33:37 - 28.43
2023-03-13 20:26:37 - 28.96	2023-03-13 21:00:37 - 28.51	2023-03-13 21:34:37 - 28.49
2023-03-13 20:27:37 - 29.13	2023-03-13 21:01:37 - 28.48	2023-03-13 21:35:37 - 28.52
2023-03-13 20:28:37 - 29.17	2023-03-13 21:02:37 - 28.6	2023-03-13 21:36:37 - 28.39
2023-03-13 20:29:37 - 29.05	2023-03-13 21:03:37 - 28.53	2023-03-13 21:37:37 - 28.44
2023-03-13 20:30:37 - 29.1	2023-03-13 21:04:37 - 28.46	2023-03-13 21:38:37 - 28.52
2023-03-13 20:31:37 - 29.11	2023-03-13 21:05:37 - 28.52	2023-03-13 21:39:37 - 28.51
2023-03-13 20:32:37 - 29.09	2023-03-13 21:06:37 - 28.42	2023-03-13 21:40:37 - 28.59
2023-03-13 20:33:37 - 29.09	2023-03-13 21:07:37 - 28.64	2023-03-13 21:41:37 - 28.53
2023-03-13 20:34:37 - 28.98	2023-03-13 21:08:37 - 28.55	2023-03-13 21:42:37 - 28.52
2023-03-13 20:35:37 - 29.08	2023-03-13 21:09:37 - 28.54	2023-03-13 21:43:37 - 28.52
2023-03-13 20:36:37 - 29.06	2023-03-13 21:10:37 - 28.49	2023-03-13 21:44:37 - 28.41
2023-03-13 20:37:37 - 29.08	2023-03-13 21:11:37 - 28.57	2023-03-13 21:45:37 - 28.51
2023-03-13 20:38:37 - 28.84	2023-03-13 21:12:37 - 28.53	2023-03-13 21:46:37 - 28.35
2023-03-13 20:39:37 - 29.22	2023-03-13 21:13:37 - 28.51	2023-03-13 21:47:37 - 28.56
2023-03-13 20:40:37 - 29.07	2023-03-13 21:14:37 - 28.55	2023-03-13 21:48:37 - 28.5
2023-03-13 20:41:37 - 29.09	2023-03-13 21:15:37 - 28.49	2023-03-13 21:49:37 - 28.52
2023-03-13 20:42:37 - 29.05	2023-03-13 21:16:37 - 28.53	2023-03-13 21:50:37 - 28.56
2023-03-13 20:43:37 - 29.05	2023-03-13 21:17:37 - 28.5	2023-03-13 21:51:37 - 28.46
2023-03-13 20:44:37 - 29.08	2023-03-13 21:18:37 - 28.4	2023-03-13 21:52:37 - 28.64
2023-03-13 20:45:37 - 29.12	2023-03-13 21:19:37 - 28.51	2023-03-13 21:53:37 - 28.51
2023-03-13 20:46:37 - 29.06	2023-03-13 21:20:37 - 28.51	2023-03-13 21:54:37 - 28.38
2023-03-13 20:47:37 - 29.09	2023-03-13 21:21:37 - 28.5	2023-03-13 21:55:37 - 28.53
2023-03-13 20:48:37 - 29.16	2023-03-13 21:22:37 - 28.5	2023-03-13 21:56:37 - 28.5
2023-03-13 20:49:37 - 29.07	2023-03-13 21:23:37 - 28.46	2023-03-13 21:57:37 - 28.52
2023-03-13 20:50:37 - 29.14	2023-03-13 21:24:37 - 28.68	2023-03-13 21:58:37 - 28.54
2023-03-13 20:51:37 - 29.08	2023-03-13 21:25:37 - 28.41	2023-03-13 21:59:37 - 28.62
2023-03-13 20:52:37 - 28.95	2023-03-13 21:26:37 - 28.6	2023-03-13 22:00:37 - 28.41
2023-03-13 20:53:37 - 29.0	2023-03-13 21:27:37 - 28.57	2023-03-13 22:01:37 - 28.43
2023-03-13 20:54:37 - 29.04	2023-03-13 21:28:37 - 28.48	2023-03-13 22:02:37 - 28.34
2023-03-13 20:55:37 - 29.05	2023-03-13 21:29:37 - 28.5	2023-03-13 22:03:37 - 28.41
2023-03-13 20:56:37 - 29.04	2023-03-13 21:30:37 - 28.59	2023-03-13 22:04:37 - 28.46
2023-03-13 20:57:37 - 29.04	2023-03-13 21:31:37 - 28.33	2023-03-13 22:05:37 - 28.37

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 22:06:37 - 28.47	2023-03-13 22:40:37 - 28.37	2023-03-13 23:14:37 - 29.37
2023-03-13 22:07:37 - 28.42	2023-03-13 22:41:37 - 28.44	2023-03-13 23:15:37 - 29.29
2023-03-13 22:08:37 - 28.23	2023-03-13 22:42:37 - 28.28	2023-03-13 23:16:37 - 29.27
2023-03-13 22:09:37 - 28.33	2023-03-13 22:43:37 - 28.41	2023-03-13 23:17:37 - 29.19
2023-03-13 22:10:37 - 28.4	2023-03-13 22:44:37 - 28.34	2023-03-13 23:18:37 - 29.25
2023-03-13 22:11:37 - 28.37	2023-03-13 22:45:37 - 28.39	2023-03-13 23:19:37 - 29.22
2023-03-13 22:12:37 - 28.39	2023-03-13 22:46:37 - 28.4	2023-03-13 23:20:37 - 29.34
2023-03-13 22:13:37 - 28.38	2023-03-13 22:47:37 - 28.43	2023-03-13 23:21:37 - 29.37
2023-03-13 22:14:37 - 28.42	2023-03-13 22:48:37 - 28.4	2023-03-13 23:22:37 - 29.27
2023-03-13 22:15:37 - 28.42	2023-03-13 22:49:37 - 28.42	2023-03-13 23:23:37 - 29.22
2023-03-13 22:16:37 - 28.4	2023-03-13 22:50:37 - 28.37	2023-03-13 23:24:37 - 29.32
2023-03-13 22:17:37 - 28.51	2023-03-13 22:51:37 - 28.3	2023-03-13 23:25:37 - 29.24
2023-03-13 22:18:37 - 28.42	2023-03-13 22:52:37 - 28.35	2023-03-13 23:26:37 - 29.24
2023-03-13 22:19:37 - 28.35	2023-03-13 22:53:37 - 28.5	2023-03-13 23:27:37 - 29.28
2023-03-13 22:20:37 - 28.42	2023-03-13 22:54:37 - 28.47	2023-03-13 23:28:37 - 29.32
2023-03-13 22:21:37 - 28.39	2023-03-13 22:55:37 - 28.51	2023-03-13 23:29:37 - 29.24
2023-03-13 22:22:37 - 28.39	2023-03-13 22:56:37 - 28.41	2023-03-13 23:30:37 - 29.37
2023-03-13 22:23:37 - 28.44	2023-03-13 22:57:37 - 28.49	2023-03-13 23:31:37 - 29.32
2023-03-13 22:24:37 - 28.43	2023-03-13 22:58:37 - 28.36	2023-03-13 23:32:37 - 29.27
2023-03-13 22:25:37 - 28.46	2023-03-13 22:59:37 - 28.8	2023-03-13 23:33:37 - 29.3
2023-03-13 22:26:37 - 28.39	2023-03-13 23:00:37 - 29.26	2023-03-13 23:34:37 - 29.2
2023-03-13 22:27:37 - 28.36	2023-03-13 23:01:37 - 29.22	2023-03-13 23:35:37 - 29.11
2023-03-13 22:28:37 - 28.4	2023-03-13 23:02:37 - 29.23	2023-03-13 23:36:37 - 29.23
2023-03-13 22:29:37 - 28.43	2023-03-13 23:03:37 - 29.26	2023-03-13 23:37:37 - 29.28
2023-03-13 22:30:37 - 28.41	2023-03-13 23:04:37 - 29.31	2023-03-13 23:38:37 - 29.28
2023-03-13 22:31:37 - 28.41	2023-03-13 23:05:37 - 29.28	2023-03-13 23:39:37 - 29.28
2023-03-13 22:32:37 - 28.45	2023-03-13 23:06:37 - 29.15	2023-03-13 23:40:37 - 29.11
2023-03-13 22:33:37 - 28.35	2023-03-13 23:07:37 - 29.3	2023-03-13 23:41:37 - 29.32
2023-03-13 22:34:37 - 28.47	2023-03-13 23:08:37 - 29.19	2023-03-13 23:42:37 - 29.28
2023-03-13 22:35:37 - 28.44	2023-03-13 23:09:37 - 29.29	2023-03-13 23:43:37 - 29.27
2023-03-13 22:36:37 - 28.41	2023-03-13 23:10:37 - 29.35	2023-03-13 23:44:37 - 29.26
2023-03-13 22:37:37 - 28.38	2023-03-13 23:11:37 - 29.24	2023-03-13 23:45:37 - 29.27
2023-03-13 22:38:37 - 28.34	2023-03-13 23:12:37 - 29.22	2023-03-13 23:46:37 - 29.27
2023-03-13 22:39:37 - 28.45	2023-03-13 23:13:37 - 29.26	2023-03-13 23:47:37 - 29.27

Horário/Leitura

2023-03-13 23:48:37 - 29.21
2023-03-13 23:49:37 - 29.27
2023-03-13 23:50:37 - 29.4
2023-03-13 23:51:37 - 29.27
2023-03-13 23:52:37 - 29.21
2023-03-13 23:53:37 - 29.25
2023-03-13 23:54:37 - 29.34
2023-03-13 23:55:37 - 29.35
2023-03-13 23:56:37 - 29.22
2023-03-13 23:57:37 - 29.29
2023-03-13 23:58:37 - 29.35
2023-03-13 23:59:37 - 29.35

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 00:00:43 - 30.84	2023-03-13 00:34:43 - 30.98	2023-03-13 01:08:43 - 30.65
2023-03-13 00:01:43 - 30.91	2023-03-13 00:35:43 - 30.89	2023-03-13 01:09:43 - 30.61
2023-03-13 00:02:43 - 30.9	2023-03-13 00:36:43 - 30.9	2023-03-13 01:10:43 - 30.69
2023-03-13 00:03:43 - 30.92	2023-03-13 00:37:43 - 30.9	2023-03-13 01:11:43 - 30.68
2023-03-13 00:04:43 - 30.9	2023-03-13 00:38:43 - 30.81	2023-03-13 01:12:43 - 30.73
2023-03-13 00:05:43 - 30.92	2023-03-13 00:39:43 - 30.92	2023-03-13 01:13:43 - 30.7
2023-03-13 00:06:43 - 30.9	2023-03-13 00:40:43 - 30.9	2023-03-13 01:14:43 - 30.7
2023-03-13 00:07:43 - 30.9	2023-03-13 00:41:43 - 30.97	2023-03-13 01:15:43 - 30.69
2023-03-13 00:08:43 - 30.82	2023-03-13 00:42:43 - 30.88	2023-03-13 01:16:43 - 30.66
2023-03-13 00:09:43 - 30.96	2023-03-13 00:43:43 - 30.88	2023-03-13 01:17:43 - 30.56
2023-03-13 00:10:43 - 30.91	2023-03-13 00:44:43 - 30.83	2023-03-13 01:18:43 - 30.72
2023-03-13 00:11:43 - 30.95	2023-03-13 00:45:43 - 30.94	2023-03-13 01:19:43 - 30.74
2023-03-13 00:12:43 - 30.9	2023-03-13 00:46:43 - 30.94	2023-03-13 01:20:43 - 30.69
2023-03-13 00:13:43 - 30.95	2023-03-13 00:47:43 - 30.89	2023-03-13 01:21:43 - 30.69
2023-03-13 00:14:43 - 30.94	2023-03-13 00:48:43 - 30.95	2023-03-13 01:22:43 - 30.67
2023-03-13 00:15:43 - 30.95	2023-03-13 00:49:43 - 30.93	2023-03-13 01:23:43 - 30.71
2023-03-13 00:16:43 - 30.95	2023-03-13 00:50:43 - 31.0	2023-03-13 01:24:43 - 30.76
2023-03-13 00:17:43 - 30.87	2023-03-13 00:51:43 - 30.91	2023-03-13 01:25:43 - 30.76
2023-03-13 00:18:43 - 30.9	2023-03-13 00:52:43 - 30.93	2023-03-13 01:26:43 - 30.73
2023-03-13 00:19:43 - 30.92	2023-03-13 00:53:43 - 30.89	2023-03-13 01:27:43 - 30.7
2023-03-13 00:20:43 - 30.91	2023-03-13 00:54:43 - 30.95	2023-03-13 01:28:43 - 30.67
2023-03-13 00:21:43 - 30.92	2023-03-13 00:55:43 - 30.87	2023-03-13 01:29:43 - 30.8
2023-03-13 00:22:43 - 30.93	2023-03-13 00:56:43 - 30.89	2023-03-13 01:30:43 - 30.72
2023-03-13 00:23:43 - 30.87	2023-03-13 00:57:43 - 30.94	2023-03-13 01:31:43 - 30.49
2023-03-13 00:24:43 - 30.73	2023-03-13 00:58:43 - 30.83	2023-03-13 01:32:43 - 30.53
2023-03-13 00:25:43 - 30.89	2023-03-13 00:59:43 - 30.89	2023-03-13 01:33:43 - 30.59
2023-03-13 00:26:43 - 30.9	2023-03-13 01:00:43 - 30.72	2023-03-13 01:34:43 - 30.62
2023-03-13 00:27:43 - 30.89	2023-03-13 01:01:43 - 30.63	2023-03-13 01:35:43 - 30.81
2023-03-13 00:28:43 - 30.82	2023-03-13 01:02:43 - 30.62	2023-03-13 01:36:43 - 30.71
2023-03-13 00:29:43 - 30.89	2023-03-13 01:03:43 - 30.7	2023-03-13 01:37:43 - 30.67
2023-03-13 00:30:43 - 30.89	2023-03-13 01:04:43 - 30.71	2023-03-13 01:38:43 - 30.76
2023-03-13 00:31:43 - 30.88	2023-03-13 01:05:43 - 30.78	2023-03-13 01:39:43 - 30.67
2023-03-13 00:32:43 - 30.91	2023-03-13 01:06:43 - 30.85	2023-03-13 01:40:43 - 30.7
2023-03-13 00:33:43 - 30.76	2023-03-13 01:07:43 - 30.64	2023-03-13 01:41:43 - 30.71

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 01:42:43 - 30.69	2023-03-13 02:16:43 - 30.51	2023-03-13 02:50:43 - 30.49
2023-03-13 01:43:43 - 30.7	2023-03-13 02:17:43 - 30.43	2023-03-13 02:51:43 - 30.53
2023-03-13 01:44:43 - 30.67	2023-03-13 02:18:43 - 30.6	2023-03-13 02:52:43 - 30.48
2023-03-13 01:45:43 - 30.82	2023-03-13 02:19:43 - 30.52	2023-03-13 02:53:43 - 30.61
2023-03-13 01:46:43 - 30.75	2023-03-13 02:20:43 - 30.6	2023-03-13 02:54:43 - 30.55
2023-03-13 01:47:43 - 30.72	2023-03-13 02:21:43 - 30.55	2023-03-13 02:55:43 - 30.55
2023-03-13 01:48:43 - 30.77	2023-03-13 02:22:43 - 30.57	2023-03-13 02:56:43 - 30.56
2023-03-13 01:49:43 - 30.65	2023-03-13 02:23:43 - 30.47	2023-03-13 02:57:43 - 30.56
2023-03-13 01:50:43 - 30.65	2023-03-13 02:24:43 - 30.45	2023-03-13 02:58:43 - 30.54
2023-03-13 01:51:43 - 30.7	2023-03-13 02:25:43 - 30.53	2023-03-13 02:59:43 - 30.81
2023-03-13 01:52:43 - 30.7	2023-03-13 02:26:43 - 30.39	2023-03-13 03:00:43 - 30.52
2023-03-13 01:53:43 - 30.78	2023-03-13 02:27:43 - 30.65	2023-03-13 03:01:43 - 30.38
2023-03-13 01:54:43 - 30.64	2023-03-13 02:28:43 - 30.67	2023-03-13 03:02:43 - 30.45
2023-03-13 01:55:43 - 30.66	2023-03-13 02:29:43 - 30.51	2023-03-13 03:03:43 - 30.38
2023-03-13 01:56:43 - 30.63	2023-03-13 02:30:43 - 30.45	2023-03-13 03:04:43 - 30.39
2023-03-13 01:57:43 - 30.7	2023-03-13 02:31:43 - 30.51	2023-03-13 03:05:43 - 30.43
2023-03-13 01:58:43 - 30.69	2023-03-13 02:32:43 - 30.51	2023-03-13 03:06:43 - 30.47
2023-03-13 01:59:43 - 30.53	2023-03-13 02:33:43 - 30.54	2023-03-13 03:07:43 - 30.48
2023-03-13 02:00:43 - 30.57	2023-03-13 02:34:43 - 30.54	2023-03-13 03:08:43 - 30.42
2023-03-13 02:01:43 - 30.52	2023-03-13 02:35:43 - 30.5	2023-03-13 03:09:43 - 30.43
2023-03-13 02:02:43 - 30.5	2023-03-13 02:36:43 - 30.53	2023-03-13 03:10:43 - 30.42
2023-03-13 02:03:43 - 30.52	2023-03-13 02:37:43 - 30.5	2023-03-13 03:11:43 - 30.46
2023-03-13 02:04:43 - 30.54	2023-03-13 02:38:43 - 30.38	2023-03-13 03:12:43 - 30.47
2023-03-13 02:05:43 - 30.64	2023-03-13 02:39:43 - 30.4	2023-03-13 03:13:43 - 30.5
2023-03-13 02:06:43 - 30.48	2023-03-13 02:40:43 - 30.51	2023-03-13 03:14:43 - 30.5
2023-03-13 02:07:43 - 30.47	2023-03-13 02:41:43 - 30.42	2023-03-13 03:15:43 - 30.44
2023-03-13 02:08:43 - 30.57	2023-03-13 02:42:43 - 30.52	2023-03-13 03:16:43 - 30.51
2023-03-13 02:09:43 - 30.44	2023-03-13 02:43:43 - 30.48	2023-03-13 03:17:43 - 30.43
2023-03-13 02:10:43 - 30.52	2023-03-13 02:44:43 - 30.42	2023-03-13 03:18:43 - 30.45
2023-03-13 02:11:43 - 30.44	2023-03-13 02:45:43 - 30.5	2023-03-13 03:19:43 - 30.43
2023-03-13 02:12:43 - 30.5	2023-03-13 02:46:43 - 30.48	2023-03-13 03:20:43 - 30.42
2023-03-13 02:13:43 - 30.51	2023-03-13 02:47:43 - 30.57	2023-03-13 03:21:43 - 30.48
2023-03-13 02:14:43 - 30.51	2023-03-13 02:48:43 - 30.48	2023-03-13 03:22:43 - 30.44
2023-03-13 02:15:43 - 30.54	2023-03-13 02:49:43 - 30.55	2023-03-13 03:23:43 - 30.42

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 03:24:43 - 30.42	2023-03-13 03:58:43 - 30.49	2023-03-13 04:32:43 - 30.3
2023-03-13 03:25:43 - 30.49	2023-03-13 03:59:43 - 30.69	2023-03-13 04:33:43 - 30.28
2023-03-13 03:26:43 - 30.43	2023-03-13 04:00:43 - 30.45	2023-03-13 04:34:43 - 30.34
2023-03-13 03:27:43 - 30.24	2023-03-13 04:01:43 - 30.38	2023-03-13 04:35:43 - 30.49
2023-03-13 03:28:43 - 30.4	2023-03-13 04:02:43 - 30.38	2023-03-13 04:36:43 - 30.37
2023-03-13 03:29:43 - 30.5	2023-03-13 04:03:43 - 30.32	2023-03-13 04:37:43 - 30.29
2023-03-13 03:30:43 - 30.47	2023-03-13 04:04:43 - 30.36	2023-03-13 04:38:43 - 30.37
2023-03-13 03:31:43 - 30.42	2023-03-13 04:05:43 - 30.39	2023-03-13 04:39:43 - 30.34
2023-03-13 03:32:43 - 30.42	2023-03-13 04:06:43 - 30.35	2023-03-13 04:40:43 - 30.45
2023-03-13 03:33:43 - 30.35	2023-03-13 04:07:43 - 30.36	2023-03-13 04:41:43 - 30.31
2023-03-13 03:34:43 - 30.44	2023-03-13 04:08:43 - 30.35	2023-03-13 04:42:43 - 30.32
2023-03-13 03:35:43 - 30.49	2023-03-13 04:09:43 - 30.48	2023-03-13 04:43:43 - 30.32
2023-03-13 03:36:43 - 30.41	2023-03-13 04:10:43 - 30.33	2023-03-13 04:44:43 - 30.37
2023-03-13 03:37:43 - 30.46	2023-03-13 04:11:43 - 30.33	2023-03-13 04:45:43 - 30.39
2023-03-13 03:38:43 - 30.4	2023-03-13 04:12:43 - 30.46	2023-03-13 04:46:43 - 30.43
2023-03-13 03:39:43 - 30.4	2023-03-13 04:13:43 - 30.51	2023-03-13 04:47:43 - 30.32
2023-03-13 03:40:43 - 30.41	2023-03-13 04:14:43 - 30.34	2023-03-13 04:48:43 - 30.39
2023-03-13 03:41:43 - 30.49	2023-03-13 04:15:43 - 30.19	2023-03-13 04:49:43 - 30.37
2023-03-13 03:42:43 - 30.36	2023-03-13 04:16:43 - 30.36	2023-03-13 04:50:43 - 30.31
2023-03-13 03:43:43 - 30.47	2023-03-13 04:17:43 - 30.28	2023-03-13 04:51:43 - 30.37
2023-03-13 03:44:43 - 30.45	2023-03-13 04:18:43 - 30.42	2023-03-13 04:52:43 - 30.36
2023-03-13 03:45:43 - 30.48	2023-03-13 04:19:43 - 30.28	2023-03-13 04:53:43 - 30.4
2023-03-13 03:46:43 - 30.47	2023-03-13 04:20:43 - 30.32	2023-03-13 04:54:43 - 30.33
2023-03-13 03:47:43 - 30.39	2023-03-13 04:21:43 - 30.38	2023-03-13 04:55:43 - 30.33
2023-03-13 03:48:43 - 30.43	2023-03-13 04:22:43 - 30.35	2023-03-13 04:56:43 - 30.34
2023-03-13 03:49:43 - 30.36	2023-03-13 04:23:43 - 30.32	2023-03-13 04:57:43 - 30.3
2023-03-13 03:50:43 - 30.39	2023-03-13 04:24:43 - 30.39	2023-03-13 04:58:43 - 30.36
2023-03-13 03:51:43 - 30.57	2023-03-13 04:25:43 - 30.45	2023-03-13 04:59:43 - 29.84
2023-03-13 03:52:43 - 30.34	2023-03-13 04:26:43 - 30.32	2023-03-13 05:00:43 - 30.01
2023-03-13 03:53:43 - 30.36	2023-03-13 04:27:43 - 30.35	2023-03-13 05:01:43 - 30.04
2023-03-13 03:54:43 - 30.47	2023-03-13 04:28:43 - 30.37	2023-03-13 05:02:43 - 30.0
2023-03-13 03:55:43 - 30.46	2023-03-13 04:29:43 - 30.34	2023-03-13 05:03:43 - 30.05
2023-03-13 03:56:43 - 30.43	2023-03-13 04:30:43 - 30.32	2023-03-13 05:04:43 - 30.02
2023-03-13 03:57:43 - 30.45	2023-03-13 04:31:43 - 30.4	2023-03-13 05:05:43 - 30.07

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 05:06:43 - 30.02	2023-03-13 05:40:43 - 29.99	2023-03-13 06:14:43 - 29.75
2023-03-13 05:07:43 - 29.99	2023-03-13 05:41:43 - 29.93	2023-03-13 06:15:43 - 29.76
2023-03-13 05:08:43 - 30.07	2023-03-13 05:42:43 - 30.07	2023-03-13 06:16:43 - 29.52
2023-03-13 05:09:43 - 30.01	2023-03-13 05:43:43 - 29.98	2023-03-13 06:17:43 - 29.64
2023-03-13 05:10:43 - 30.0	2023-03-13 05:44:43 - 29.95	2023-03-13 06:18:43 - 29.67
2023-03-13 05:11:43 - 30.0	2023-03-13 05:45:43 - 29.99	2023-03-13 06:19:43 - 29.68
2023-03-13 05:12:43 - 29.98	2023-03-13 05:46:43 - 29.96	2023-03-13 06:20:43 - 29.67
2023-03-13 05:13:43 - 30.04	2023-03-13 05:47:43 - 30.0	2023-03-13 06:21:43 - 29.69
2023-03-13 05:14:43 - 30.0	2023-03-13 05:48:43 - 30.04	2023-03-13 06:22:43 - 29.58
2023-03-13 05:15:43 - 29.96	2023-03-13 05:49:43 - 29.99	2023-03-13 06:23:43 - 29.59
2023-03-13 05:16:43 - 29.97	2023-03-13 05:50:43 - 30.03	2023-03-13 06:24:43 - 29.53
2023-03-13 05:17:43 - 30.03	2023-03-13 05:51:43 - 30.01	2023-03-13 06:25:43 - 29.68
2023-03-13 05:18:43 - 29.96	2023-03-13 05:52:43 - 29.96	2023-03-13 06:26:43 - 29.82
2023-03-13 05:19:43 - 29.96	2023-03-13 05:53:43 - 30.0	2023-03-13 06:27:43 - 29.62
2023-03-13 05:20:43 - 30.08	2023-03-13 05:54:43 - 30.01	2023-03-13 06:28:43 - 29.63
2023-03-13 05:21:43 - 29.98	2023-03-13 05:55:43 - 30.05	2023-03-13 06:29:43 - 29.7
2023-03-13 05:22:43 - 30.0	2023-03-13 05:56:43 - 29.93	2023-03-13 06:30:43 - 29.65
2023-03-13 05:23:43 - 30.07	2023-03-13 05:57:43 - 29.95	2023-03-13 06:31:43 - 29.64
2023-03-13 05:24:43 - 29.9	2023-03-13 05:58:43 - 30.0	2023-03-13 06:32:43 - 29.67
2023-03-13 05:25:43 - 30.04	2023-03-13 05:59:43 - 30.2	2023-03-13 06:33:43 - 29.66
2023-03-13 05:26:43 - 30.08	2023-03-13 06:00:43 - 29.63	2023-03-13 06:34:43 - 29.7
2023-03-13 05:27:43 - 30.03	2023-03-13 06:01:43 - 29.63	2023-03-13 06:35:43 - 29.53
2023-03-13 05:28:43 - 29.99	2023-03-13 06:02:43 - 29.67	2023-03-13 06:36:43 - 29.67
2023-03-13 05:29:43 - 29.97	2023-03-13 06:03:43 - 29.81	2023-03-13 06:37:43 - 29.65
2023-03-13 05:30:43 - 29.99	2023-03-13 06:04:43 - 29.62	2023-03-13 06:38:43 - 29.68
2023-03-13 05:31:43 - 30.04	2023-03-13 06:05:43 - 29.76	2023-03-13 06:39:43 - 29.72
2023-03-13 05:32:43 - 30.0	2023-03-13 06:06:43 - 29.66	2023-03-13 06:40:43 - 29.64
2023-03-13 05:33:43 - 29.97	2023-03-13 06:07:43 - 29.59	2023-03-13 06:41:43 - 29.7
2023-03-13 05:34:43 - 29.97	2023-03-13 06:08:43 - 29.69	2023-03-13 06:42:43 - 29.86
2023-03-13 05:35:43 - 30.04	2023-03-13 06:09:43 - 29.64	2023-03-13 06:43:43 - 29.66
2023-03-13 05:36:43 - 30.09	2023-03-13 06:10:43 - 29.55	2023-03-13 06:44:43 - 29.67
2023-03-13 05:37:43 - 30.14	2023-03-13 06:11:43 - 29.74	2023-03-13 06:45:43 - 29.65
2023-03-13 05:38:43 - 30.03	2023-03-13 06:12:43 - 29.65	2023-03-13 06:46:43 - 29.64
2023-03-13 05:39:43 - 29.99	2023-03-13 06:13:43 - 29.66	2023-03-13 06:47:43 - 29.67

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 06:48:43 - 29.66	2023-03-13 07:22:43 - 28.95	2023-03-13 07:56:43 - 28.95
2023-03-13 06:49:43 - 29.59	2023-03-13 07:23:43 - 28.93	2023-03-13 07:57:43 - 28.91
2023-03-13 06:50:43 - 29.65	2023-03-13 07:24:43 - 28.98	2023-03-13 07:58:43 - 28.94
2023-03-13 06:51:43 - 29.68	2023-03-13 07:25:43 - 28.95	2023-03-13 07:59:43 - 29.11
2023-03-13 06:52:43 - 29.67	2023-03-13 07:26:43 - 29.09	2023-03-13 08:00:43 - 30.28
2023-03-13 06:53:43 - 29.65	2023-03-13 07:27:43 - 28.97	2023-03-13 08:01:43 - 30.21
2023-03-13 06:54:43 - 29.69	2023-03-13 07:28:43 - 28.93	2023-03-13 08:02:43 - 30.22
2023-03-13 06:55:43 - 29.56	2023-03-13 07:29:43 - 28.97	2023-03-13 08:03:43 - 30.28
2023-03-13 06:56:43 - 29.67	2023-03-13 07:30:43 - 28.87	2023-03-13 08:04:43 - 30.29
2023-03-13 06:57:43 - 29.61	2023-03-13 07:31:43 - 29.01	2023-03-13 08:05:43 - 30.19
2023-03-13 06:58:43 - 29.67	2023-03-13 07:32:43 - 28.95	2023-03-13 08:06:43 - 30.27
2023-03-13 06:59:43 - 29.6	2023-03-13 07:33:43 - 28.85	2023-03-13 08:07:43 - 30.32
2023-03-13 07:00:43 - 28.96	2023-03-13 07:34:43 - 28.91	2023-03-13 08:08:43 - 30.12
2023-03-13 07:01:43 - 28.93	2023-03-13 07:35:43 - 29.01	2023-03-13 08:09:43 - 30.23
2023-03-13 07:02:43 - 28.92	2023-03-13 07:36:43 - 29.08	2023-03-13 08:10:43 - 30.24
2023-03-13 07:03:43 - 29.0	2023-03-13 07:37:43 - 28.96	2023-03-13 08:11:43 - 30.18
2023-03-13 07:04:43 - 29.13	2023-03-13 07:38:43 - 28.96	2023-03-13 08:12:43 - 30.38
2023-03-13 07:05:43 - 28.89	2023-03-13 07:39:43 - 28.98	2023-03-13 08:13:43 - 30.25
2023-03-13 07:06:43 - 28.97	2023-03-13 07:40:43 - 28.92	2023-03-13 08:14:43 - 30.26
2023-03-13 07:07:43 - 29.11	2023-03-13 07:41:43 - 28.97	2023-03-13 08:15:43 - 30.33
2023-03-13 07:08:43 - 28.92	2023-03-13 07:42:43 - 29.0	2023-03-13 08:16:43 - 30.21
2023-03-13 07:09:43 - 28.91	2023-03-13 07:43:43 - 28.96	2023-03-13 08:17:43 - 30.36
2023-03-13 07:10:43 - 28.94	2023-03-13 07:44:43 - 28.99	2023-03-13 08:18:43 - 30.11
2023-03-13 07:11:43 - 29.02	2023-03-13 07:45:43 - 28.94	2023-03-13 08:19:43 - 30.17
2023-03-13 07:12:43 - 28.96	2023-03-13 07:46:43 - 28.97	2023-03-13 08:20:43 - 30.28
2023-03-13 07:13:43 - 28.86	2023-03-13 07:47:43 - 28.95	2023-03-13 08:21:43 - 30.31
2023-03-13 07:14:43 - 28.88	2023-03-13 07:48:43 - 28.91	2023-03-13 08:22:43 - 30.3
2023-03-13 07:15:43 - 28.97	2023-03-13 07:49:43 - 29.01	2023-03-13 08:23:43 - 30.23
2023-03-13 07:16:43 - 28.9	2023-03-13 07:50:43 - 28.87	2023-03-13 08:24:43 - 30.18
2023-03-13 07:17:43 - 29.02	2023-03-13 07:51:43 - 28.91	2023-03-13 08:25:43 - 30.27
2023-03-13 07:18:43 - 28.99	2023-03-13 07:52:43 - 28.94	2023-03-13 08:26:43 - 30.27
2023-03-13 07:19:43 - 28.96	2023-03-13 07:53:43 - 28.85	2023-03-13 08:27:43 - 30.31
2023-03-13 07:20:43 - 29.02	2023-03-13 07:54:43 - 28.95	2023-03-13 08:28:43 - 30.27
2023-03-13 07:21:43 - 29.0	2023-03-13 07:55:43 - 28.97	2023-03-13 08:29:43 - 30.35

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 08:30:43 - 30.31	2023-03-13 09:04:43 - 27.53	2023-03-13 09:38:43 - 27.41
2023-03-13 08:31:43 - 30.31	2023-03-13 09:05:43 - 27.55	2023-03-13 09:39:43 - 27.43
2023-03-13 08:32:43 - 30.3	2023-03-13 09:06:43 - 27.53	2023-03-13 09:40:43 - 27.53
2023-03-13 08:33:43 - 30.31	2023-03-13 09:07:43 - 27.53	2023-03-13 09:41:43 - 27.5
2023-03-13 08:34:43 - 30.26	2023-03-13 09:08:43 - 27.58	2023-03-13 09:42:43 - 27.56
2023-03-13 08:35:43 - 30.28	2023-03-13 09:09:43 - 27.56	2023-03-13 09:43:43 - 27.48
2023-03-13 08:36:43 - 30.35	2023-03-13 09:10:43 - 27.56	2023-03-13 09:44:43 - 27.55
2023-03-13 08:37:43 - 30.24	2023-03-13 09:11:43 - 27.64	2023-03-13 09:45:43 - 27.49
2023-03-13 08:38:43 - 30.29	2023-03-13 09:12:43 - 27.51	2023-03-13 09:46:43 - 27.53
2023-03-13 08:39:43 - 30.26	2023-03-13 09:13:43 - 27.54	2023-03-13 09:47:43 - 27.52
2023-03-13 08:40:43 - 30.26	2023-03-13 09:14:43 - 27.53	2023-03-13 09:48:43 - 27.52
2023-03-13 08:41:43 - 30.29	2023-03-13 09:15:43 - 27.64	2023-03-13 09:49:43 - 27.63
2023-03-13 08:42:43 - 30.29	2023-03-13 09:16:43 - 27.67	2023-03-13 09:50:43 - 27.56
2023-03-13 08:43:43 - 30.25	2023-03-13 09:17:43 - 27.43	2023-03-13 09:51:43 - 27.53
2023-03-13 08:44:43 - 30.29	2023-03-13 09:18:43 - 27.63	2023-03-13 09:52:43 - 27.5
2023-03-13 08:45:43 - 30.27	2023-03-13 09:19:43 - 27.55	2023-03-13 09:53:43 - 27.55
2023-03-13 08:46:43 - 30.39	2023-03-13 09:20:43 - 27.62	2023-03-13 09:54:43 - 27.53
2023-03-13 08:47:43 - 30.4	2023-03-13 09:21:43 - 27.65	2023-03-13 09:55:43 - 27.61
2023-03-13 08:48:43 - 30.26	2023-03-13 09:22:43 - 27.62	2023-03-13 09:56:43 - 27.56
2023-03-13 08:49:43 - 30.28	2023-03-13 09:23:43 - 27.55	2023-03-13 09:57:43 - 27.54
2023-03-13 08:50:43 - 30.32	2023-03-13 09:24:43 - 27.55	2023-03-13 09:58:43 - 27.5
2023-03-13 08:51:43 - 30.3	2023-03-13 09:25:43 - 27.52	2023-03-13 09:59:43 - 27.84
2023-03-13 08:52:43 - 30.26	2023-03-13 09:26:43 - 27.58	2023-03-13 10:00:43 - 29.63
2023-03-13 08:53:43 - 30.3	2023-03-13 09:27:43 - 27.57	2023-03-13 10:01:43 - 29.72
2023-03-13 08:54:43 - 30.28	2023-03-13 09:28:43 - 27.55	2023-03-13 10:02:43 - 29.65
2023-03-13 08:55:43 - 30.29	2023-03-13 09:29:43 - 27.44	2023-03-13 10:03:43 - 29.66
2023-03-13 08:56:43 - 30.31	2023-03-13 09:30:43 - 27.56	2023-03-13 10:04:43 - 29.64
2023-03-13 08:57:43 - 30.29	2023-03-13 09:31:43 - 27.49	2023-03-13 10:05:43 - 29.61
2023-03-13 08:58:43 - 30.22	2023-03-13 09:32:43 - 27.54	2023-03-13 10:06:43 - 29.61
2023-03-13 08:59:43 - 30.07	2023-03-13 09:33:43 - 27.4	2023-03-13 10:07:43 - 29.59
2023-03-13 09:00:43 - 27.6	2023-03-13 09:34:43 - 27.52	2023-03-13 10:08:43 - 29.58
2023-03-13 09:01:43 - 27.63	2023-03-13 09:35:43 - 27.56	2023-03-13 10:09:43 - 29.6
2023-03-13 09:02:43 - 27.55	2023-03-13 09:36:43 - 27.62	2023-03-13 10:10:43 - 29.56
2023-03-13 09:03:43 - 27.53	2023-03-13 09:37:43 - 27.54	2023-03-13 10:11:43 - 29.59

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 10:12:43 - 29.64	2023-03-13 10:46:43 - 29.64	2023-03-13 11:20:43 - 29.65
2023-03-13 10:13:43 - 29.65	2023-03-13 10:47:43 - 29.61	2023-03-13 11:21:43 - 29.6
2023-03-13 10:14:43 - 29.53	2023-03-13 10:48:43 - 29.66	2023-03-13 11:22:43 - 29.65
2023-03-13 10:15:43 - 29.64	2023-03-13 10:49:43 - 29.71	2023-03-13 11:23:43 - 29.7
2023-03-13 10:16:43 - 29.62	2023-03-13 10:50:43 - 29.69	2023-03-13 11:24:43 - 29.59
2023-03-13 10:17:43 - 29.54	2023-03-13 10:51:43 - 29.62	2023-03-13 11:25:43 - 29.67
2023-03-13 10:18:43 - 29.59	2023-03-13 10:52:43 - 29.67	2023-03-13 11:26:43 - 29.66
2023-03-13 10:19:43 - 29.57	2023-03-13 10:53:43 - 29.62	2023-03-13 11:27:43 - 29.59
2023-03-13 10:20:43 - 29.7	2023-03-13 10:54:43 - 29.62	2023-03-13 11:28:43 - 29.67
2023-03-13 10:21:43 - 29.63	2023-03-13 10:55:43 - 29.61	2023-03-13 11:29:43 - 29.7
2023-03-13 10:22:43 - 29.45	2023-03-13 10:56:43 - 29.56	2023-03-13 11:30:43 - 29.64
2023-03-13 10:23:43 - 29.61	2023-03-13 10:57:43 - 29.57	2023-03-13 11:31:43 - 29.68
2023-03-13 10:24:43 - 29.69	2023-03-13 10:58:43 - 29.6	2023-03-13 11:32:43 - 29.63
2023-03-13 10:25:43 - 29.64	2023-03-13 10:59:43 - 29.86	2023-03-13 11:33:43 - 29.71
2023-03-13 10:26:43 - 29.62	2023-03-13 11:00:43 - 29.55	2023-03-13 11:34:43 - 29.71
2023-03-13 10:27:43 - 29.61	2023-03-13 11:01:43 - 29.67	2023-03-13 11:35:43 - 29.52
2023-03-13 10:28:43 - 29.63	2023-03-13 11:02:43 - 29.67	2023-03-13 11:36:43 - 29.6
2023-03-13 10:29:43 - 29.65	2023-03-13 11:03:43 - 29.64	2023-03-13 11:37:43 - 29.7
2023-03-13 10:30:43 - 29.53	2023-03-13 11:04:43 - 29.65	2023-03-13 11:38:43 - 29.7
2023-03-13 10:31:43 - 29.6	2023-03-13 11:05:43 - 29.75	2023-03-13 11:39:43 - 29.69
2023-03-13 10:32:43 - 29.64	2023-03-13 11:06:43 - 29.58	2023-03-13 11:40:43 - 29.79
2023-03-13 10:33:43 - 29.64	2023-03-13 11:07:43 - 29.65	2023-03-13 11:41:43 - 29.58
2023-03-13 10:34:43 - 29.71	2023-03-13 11:08:43 - 29.72	2023-03-13 11:42:43 - 29.64
2023-03-13 10:35:43 - 29.59	2023-03-13 11:09:43 - 29.61	2023-03-13 11:43:43 - 29.62
2023-03-13 10:36:43 - 29.62	2023-03-13 11:10:43 - 29.65	2023-03-13 11:44:43 - 29.68
2023-03-13 10:37:43 - 29.63	2023-03-13 11:11:43 - 29.65	2023-03-13 11:45:43 - 29.66
2023-03-13 10:38:43 - 29.56	2023-03-13 11:12:43 - 29.64	2023-03-13 11:46:43 - 29.71
2023-03-13 10:39:43 - 29.63	2023-03-13 11:13:43 - 29.63	2023-03-13 11:47:43 - 29.65
2023-03-13 10:40:43 - 29.68	2023-03-13 11:14:43 - 29.61	2023-03-13 11:48:43 - 29.71
2023-03-13 10:41:43 - 29.83	2023-03-13 11:15:43 - 29.71	2023-03-13 11:49:43 - 29.58
2023-03-13 10:42:43 - 29.76	2023-03-13 11:16:43 - 29.63	2023-03-13 11:50:43 - 29.66
2023-03-13 10:43:43 - 29.62	2023-03-13 11:17:43 - 29.61	2023-03-13 11:51:43 - 29.56
2023-03-13 10:44:43 - 29.64	2023-03-13 11:18:43 - 29.79	2023-03-13 11:52:43 - 29.72
2023-03-13 10:45:43 - 29.64	2023-03-13 11:19:43 - 29.66	2023-03-13 11:53:43 - 29.66

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 11:54:43 - 29.7	2023-03-13 12:28:43 - 27.58	2023-03-13 13:02:43 - 31.76
2023-03-13 11:55:43 - 29.68	2023-03-13 12:29:43 - 27.72	2023-03-13 13:03:43 - 31.72
2023-03-13 11:56:43 - 29.63	2023-03-13 12:30:43 - 27.67	2023-03-13 13:04:43 - 31.77
2023-03-13 11:57:43 - 29.64	2023-03-13 12:31:43 - 27.68	2023-03-13 13:05:43 - 31.64
2023-03-13 11:58:43 - 29.68	2023-03-13 12:32:43 - 27.71	2023-03-13 13:06:43 - 31.77
2023-03-13 11:59:43 - 29.3	2023-03-13 12:33:43 - 27.67	2023-03-13 13:07:43 - 31.7
2023-03-13 12:00:43 - 27.72	2023-03-13 12:34:43 - 27.58	2023-03-13 13:08:43 - 31.72
2023-03-13 12:01:43 - 27.68	2023-03-13 12:35:43 - 27.68	2023-03-13 13:09:43 - 31.71
2023-03-13 12:02:43 - 27.7	2023-03-13 12:36:43 - 27.74	2023-03-13 13:10:43 - 31.5
2023-03-13 12:03:43 - 27.76	2023-03-13 12:37:43 - 27.81	2023-03-13 13:11:43 - 31.67
2023-03-13 12:04:43 - 27.74	2023-03-13 12:38:43 - 27.7	2023-03-13 13:12:43 - 31.69
2023-03-13 12:05:43 - 27.67	2023-03-13 12:39:43 - 27.6	2023-03-13 13:13:43 - 31.75
2023-03-13 12:06:43 - 27.67	2023-03-13 12:40:43 - 27.82	2023-03-13 13:14:43 - 31.85
2023-03-13 12:07:43 - 27.51	2023-03-13 12:41:43 - 27.65	2023-03-13 13:15:43 - 31.67
2023-03-13 12:08:43 - 27.59	2023-03-13 12:42:43 - 27.75	2023-03-13 13:16:43 - 31.71
2023-03-13 12:09:43 - 27.68	2023-03-13 12:43:43 - 27.71	2023-03-13 13:17:43 - 31.72
2023-03-13 12:10:43 - 27.63	2023-03-13 12:44:43 - 27.57	2023-03-13 13:18:43 - 31.59
2023-03-13 12:11:43 - 27.66	2023-03-13 12:45:43 - 27.7	2023-03-13 13:19:43 - 31.75
2023-03-13 12:12:43 - 27.73	2023-03-13 12:46:43 - 27.71	2023-03-13 13:20:43 - 31.59
2023-03-13 12:13:43 - 27.64	2023-03-13 12:47:43 - 27.6	2023-03-13 13:21:43 - 31.7
2023-03-13 12:14:43 - 27.67	2023-03-13 12:48:43 - 27.72	2023-03-13 13:22:43 - 31.68
2023-03-13 12:15:43 - 27.69	2023-03-13 12:49:43 - 27.63	2023-03-13 13:23:43 - 31.81
2023-03-13 12:16:43 - 27.7	2023-03-13 12:50:43 - 27.66	2023-03-13 13:24:43 - 31.63
2023-03-13 12:17:43 - 27.7	2023-03-13 12:51:43 - 27.67	2023-03-13 13:25:43 - 31.7
2023-03-13 12:18:43 - 27.73	2023-03-13 12:52:43 - 27.67	2023-03-13 13:26:43 - 31.65
2023-03-13 12:19:43 - 27.57	2023-03-13 12:53:43 - 27.65	2023-03-13 13:27:43 - 31.69
2023-03-13 12:20:43 - 27.6	2023-03-13 12:54:43 - 27.74	2023-03-13 13:28:43 - 31.69
2023-03-13 12:21:43 - 27.7	2023-03-13 12:55:43 - 27.74	2023-03-13 13:29:43 - 31.73
2023-03-13 12:22:43 - 27.71	2023-03-13 12:56:43 - 27.87	2023-03-13 13:30:43 - 31.7
2023-03-13 12:23:43 - 27.81	2023-03-13 12:57:43 - 27.67	2023-03-13 13:31:43 - 31.63
2023-03-13 12:24:43 - 27.7	2023-03-13 12:58:43 - 27.69	2023-03-13 13:32:43 - 31.71
2023-03-13 12:25:43 - 27.68	2023-03-13 12:59:43 - 28.61	2023-03-13 13:33:43 - 31.77
2023-03-13 12:26:43 - 27.71	2023-03-13 13:00:43 - 31.71	2023-03-13 13:34:43 - 31.5
2023-03-13 12:27:43 - 27.72	2023-03-13 13:01:43 - 31.67	2023-03-13 13:35:43 - 31.66

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 13:36:43 - 31.56	2023-03-13 14:10:43 - 31.02	2023-03-13 14:44:43 - 31.1
2023-03-13 13:37:43 - 31.66	2023-03-13 14:11:43 - 31.01	2023-03-13 14:45:43 - 31.03
2023-03-13 13:38:43 - 31.64	2023-03-13 14:12:43 - 30.96	2023-03-13 14:46:43 - 30.99
2023-03-13 13:39:43 - 31.68	2023-03-13 14:13:43 - 31.06	2023-03-13 14:47:43 - 30.95
2023-03-13 13:40:43 - 31.67	2023-03-13 14:14:43 - 31.02	2023-03-13 14:48:43 - 31.01
2023-03-13 13:41:43 - 31.7	2023-03-13 14:15:43 - 31.05	2023-03-13 14:49:43 - 30.97
2023-03-13 13:42:43 - 31.79	2023-03-13 14:16:43 - 31.09	2023-03-13 14:50:43 - 30.99
2023-03-13 13:43:43 - 31.79	2023-03-13 14:17:43 - 31.08	2023-03-13 14:51:43 - 31.04
2023-03-13 13:44:43 - 31.67	2023-03-13 14:18:43 - 30.98	2023-03-13 14:52:43 - 31.03
2023-03-13 13:45:43 - 31.71	2023-03-13 14:19:43 - 31.01	2023-03-13 14:53:43 - 31.0
2023-03-13 13:46:43 - 31.89	2023-03-13 14:20:43 - 31.07	2023-03-13 14:54:43 - 30.93
2023-03-13 13:47:43 - 31.78	2023-03-13 14:21:43 - 30.97	2023-03-13 14:55:43 - 31.02
2023-03-13 13:48:43 - 31.77	2023-03-13 14:22:43 - 30.93	2023-03-13 14:56:43 - 30.95
2023-03-13 13:49:43 - 31.63	2023-03-13 14:23:43 - 31.01	2023-03-13 14:57:43 - 31.04
2023-03-13 13:50:43 - 31.67	2023-03-13 14:24:43 - 31.06	2023-03-13 14:58:43 - 31.02
2023-03-13 13:51:43 - 31.68	2023-03-13 14:25:43 - 30.98	2023-03-13 14:59:43 - 31.56
2023-03-13 13:52:43 - 31.65	2023-03-13 14:26:43 - 31.01	2023-03-13 15:00:43 - 25.19
2023-03-13 13:53:43 - 31.72	2023-03-13 14:27:43 - 31.05	2023-03-13 15:01:43 - 25.08
2023-03-13 13:54:43 - 31.59	2023-03-13 14:28:43 - 30.95	2023-03-13 15:02:43 - 25.11
2023-03-13 13:55:43 - 31.7	2023-03-13 14:29:43 - 31.02	2023-03-13 15:03:43 - 25.14
2023-03-13 13:56:43 - 31.68	2023-03-13 14:30:43 - 31.0	2023-03-13 15:04:43 - 25.09
2023-03-13 13:57:43 - 31.69	2023-03-13 14:31:43 - 30.93	2023-03-13 15:05:43 - 25.13
2023-03-13 13:58:43 - 31.69	2023-03-13 14:32:43 - 30.92	2023-03-13 15:06:43 - 25.09
2023-03-13 13:59:43 - 31.52	2023-03-13 14:33:43 - 30.88	2023-03-13 15:07:43 - 25.16
2023-03-13 14:00:43 - 31.02	2023-03-13 14:34:43 - 30.96	2023-03-13 15:08:43 - 25.19
2023-03-13 14:01:43 - 31.01	2023-03-13 14:35:43 - 31.04	2023-03-13 15:09:43 - 25.03
2023-03-13 14:02:43 - 31.04	2023-03-13 14:36:43 - 31.03	2023-03-13 15:10:43 - 25.05
2023-03-13 14:03:43 - 31.09	2023-03-13 14:37:43 - 31.01	2023-03-13 15:11:43 - 25.09
2023-03-13 14:04:43 - 30.89	2023-03-13 14:38:43 - 31.0	2023-03-13 15:12:43 - 25.19
2023-03-13 14:05:43 - 31.02	2023-03-13 14:39:43 - 31.02	2023-03-13 15:13:43 - 25.07
2023-03-13 14:06:43 - 31.02	2023-03-13 14:40:43 - 30.78	2023-03-13 15:14:43 - 25.1
2023-03-13 14:07:43 - 30.91	2023-03-13 14:41:43 - 31.03	2023-03-13 15:15:43 - 25.17
2023-03-13 14:08:43 - 31.0	2023-03-13 14:42:43 - 31.02	2023-03-13 15:16:43 - 25.1
2023-03-13 14:09:43 - 31.03	2023-03-13 14:43:43 - 31.01	2023-03-13 15:17:43 - 25.11

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 15:18:43 - 25.05	2023-03-13 15:52:43 - 25.17	2023-03-13 16:26:43 - 26.81
2023-03-13 15:19:43 - 25.06	2023-03-13 15:53:43 - 25.02	2023-03-13 16:27:43 - 26.68
2023-03-13 15:20:43 - 25.05	2023-03-13 15:54:43 - 25.05	2023-03-13 16:28:43 - 26.85
2023-03-13 15:21:43 - 25.03	2023-03-13 15:55:43 - 25.2	2023-03-13 16:29:43 - 26.94
2023-03-13 15:22:43 - 25.18	2023-03-13 15:56:43 - 25.08	2023-03-13 16:30:43 - 26.84
2023-03-13 15:23:43 - 25.02	2023-03-13 15:57:43 - 25.1	2023-03-13 16:31:43 - 26.86
2023-03-13 15:24:43 - 25.07	2023-03-13 15:58:43 - 25.15	2023-03-13 16:32:43 - 26.85
2023-03-13 15:25:43 - 25.12	2023-03-13 15:59:43 - 25.08	2023-03-13 16:33:43 - 26.88
2023-03-13 15:26:43 - 25.07	2023-03-13 16:00:43 - 26.85	2023-03-13 16:34:43 - 26.89
2023-03-13 15:27:43 - 25.2	2023-03-13 16:01:43 - 26.83	2023-03-13 16:35:43 - 26.92
2023-03-13 15:28:43 - 25.09	2023-03-13 16:02:43 - 26.83	2023-03-13 16:36:43 - 26.83
2023-03-13 15:29:43 - 25.08	2023-03-13 16:03:43 - 26.87	2023-03-13 16:37:43 - 26.92
2023-03-13 15:30:43 - 25.08	2023-03-13 16:04:43 - 26.81	2023-03-13 16:38:43 - 26.83
2023-03-13 15:31:43 - 24.93	2023-03-13 16:05:43 - 26.92	2023-03-13 16:39:43 - 26.93
2023-03-13 15:32:43 - 25.11	2023-03-13 16:06:43 - 26.83	2023-03-13 16:40:43 - 26.85
2023-03-13 15:33:43 - 25.02	2023-03-13 16:07:43 - 26.87	2023-03-13 16:41:43 - 26.87
2023-03-13 15:34:43 - 25.08	2023-03-13 16:08:43 - 26.77	2023-03-13 16:42:43 - 26.86
2023-03-13 15:35:43 - 25.06	2023-03-13 16:09:43 - 26.83	2023-03-13 16:43:43 - 26.82
2023-03-13 15:36:43 - 25.15	2023-03-13 16:10:43 - 26.86	2023-03-13 16:44:43 - 26.94
2023-03-13 15:37:43 - 25.05	2023-03-13 16:11:43 - 26.85	2023-03-13 16:45:43 - 26.84
2023-03-13 15:38:43 - 25.13	2023-03-13 16:12:43 - 26.86	2023-03-13 16:46:43 - 26.86
2023-03-13 15:39:43 - 25.15	2023-03-13 16:13:43 - 26.84	2023-03-13 16:47:43 - 26.9
2023-03-13 15:40:43 - 25.1	2023-03-13 16:14:43 - 26.84	2023-03-13 16:48:43 - 26.75
2023-03-13 15:41:43 - 25.18	2023-03-13 16:15:43 - 26.78	2023-03-13 16:49:43 - 26.83
2023-03-13 15:42:43 - 25.14	2023-03-13 16:16:43 - 26.86	2023-03-13 16:50:43 - 26.82
2023-03-13 15:43:43 - 24.94	2023-03-13 16:17:43 - 26.8	2023-03-13 16:51:43 - 26.73
2023-03-13 15:44:43 - 25.08	2023-03-13 16:18:43 - 26.95	2023-03-13 16:52:43 - 26.92
2023-03-13 15:45:43 - 25.01	2023-03-13 16:19:43 - 26.8	2023-03-13 16:53:43 - 26.9
2023-03-13 15:46:43 - 25.08	2023-03-13 16:20:43 - 26.85	2023-03-13 16:54:43 - 26.84
2023-03-13 15:47:43 - 25.08	2023-03-13 16:21:43 - 26.82	2023-03-13 16:55:43 - 26.86
2023-03-13 15:48:43 - 25.06	2023-03-13 16:22:43 - 26.84	2023-03-13 16:56:43 - 26.74
2023-03-13 15:49:43 - 25.0	2023-03-13 16:23:43 - 26.85	2023-03-13 16:57:43 - 26.77
2023-03-13 15:50:43 - 25.1	2023-03-13 16:24:43 - 26.85	2023-03-13 16:58:43 - 26.88
2023-03-13 15:51:43 - 24.88	2023-03-13 16:25:43 - 26.87	2023-03-13 16:59:43 - 26.49

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 17:00:43 - 30.14	2023-03-13 17:34:43 - 30.25	2023-03-13 18:08:43 - 29.53
2023-03-13 17:01:43 - 30.2	2023-03-13 17:35:43 - 29.99	2023-03-13 18:09:43 - 29.56
2023-03-13 17:02:43 - 30.06	2023-03-13 17:36:43 - 30.06	2023-03-13 18:10:43 - 29.62
2023-03-13 17:03:43 - 30.15	2023-03-13 17:37:43 - 30.15	2023-03-13 18:11:43 - 29.57
2023-03-13 17:04:43 - 30.26	2023-03-13 17:38:43 - 30.01	2023-03-13 18:12:43 - 29.55
2023-03-13 17:05:43 - 30.17	2023-03-13 17:39:43 - 30.24	2023-03-13 18:13:43 - 29.6
2023-03-13 17:06:43 - 30.18	2023-03-13 17:40:43 - 30.09	2023-03-13 18:14:43 - 29.46
2023-03-13 17:07:43 - 30.18	2023-03-13 17:41:43 - 30.22	2023-03-13 18:15:43 - 29.68
2023-03-13 17:08:43 - 30.17	2023-03-13 17:42:43 - 30.14	2023-03-13 18:16:43 - 29.69
2023-03-13 17:09:43 - 30.24	2023-03-13 17:43:43 - 30.15	2023-03-13 18:17:43 - 29.53
2023-03-13 17:10:43 - 30.16	2023-03-13 17:44:43 - 30.21	2023-03-13 18:18:43 - 29.56
2023-03-13 17:11:43 - 30.21	2023-03-13 17:45:43 - 30.12	2023-03-13 18:19:43 - 29.63
2023-03-13 17:12:43 - 30.2	2023-03-13 17:46:43 - 30.2	2023-03-13 18:20:43 - 29.57
2023-03-13 17:13:43 - 30.18	2023-03-13 17:47:43 - 30.2	2023-03-13 18:21:43 - 29.52
2023-03-13 17:14:43 - 30.18	2023-03-13 17:48:43 - 30.16	2023-03-13 18:22:43 - 29.55
2023-03-13 17:15:43 - 30.18	2023-03-13 17:49:43 - 30.21	2023-03-13 18:23:43 - 29.63
2023-03-13 17:16:43 - 30.16	2023-03-13 17:50:43 - 30.26	2023-03-13 18:24:43 - 29.67
2023-03-13 17:17:43 - 30.05	2023-03-13 17:51:43 - 30.04	2023-03-13 18:25:43 - 29.71
2023-03-13 17:18:43 - 30.17	2023-03-13 17:52:43 - 30.27	2023-03-13 18:26:43 - 29.54
2023-03-13 17:19:43 - 30.21	2023-03-13 17:53:43 - 30.26	2023-03-13 18:27:43 - 29.62
2023-03-13 17:20:43 - 30.18	2023-03-13 17:54:43 - 30.22	2023-03-13 18:28:43 - 29.44
2023-03-13 17:21:43 - 30.2	2023-03-13 17:55:43 - 30.27	2023-03-13 18:29:43 - 29.59
2023-03-13 17:22:43 - 30.2	2023-03-13 17:56:43 - 30.17	2023-03-13 18:30:43 - 29.63
2023-03-13 17:23:43 - 30.21	2023-03-13 17:57:43 - 30.19	2023-03-13 18:31:43 - 29.62
2023-03-13 17:24:43 - 30.18	2023-03-13 17:58:43 - 30.17	2023-03-13 18:32:43 - 29.53
2023-03-13 17:25:43 - 30.18	2023-03-13 17:59:43 - 30.68	2023-03-13 18:33:43 - 29.59
2023-03-13 17:26:43 - 30.17	2023-03-13 18:00:43 - 29.59	2023-03-13 18:34:43 - 29.6
2023-03-13 17:27:43 - 30.13	2023-03-13 18:01:43 - 29.61	2023-03-13 18:35:43 - 29.53
2023-03-13 17:28:43 - 30.19	2023-03-13 18:02:43 - 29.58	2023-03-13 18:36:43 - 29.58
2023-03-13 17:29:43 - 30.18	2023-03-13 18:03:43 - 29.57	2023-03-13 18:37:43 - 29.61
2023-03-13 17:30:43 - 30.1	2023-03-13 18:04:43 - 29.54	2023-03-13 18:38:43 - 29.58
2023-03-13 17:31:43 - 30.19	2023-03-13 18:05:43 - 29.6	2023-03-13 18:39:43 - 29.7
2023-03-13 17:32:43 - 30.17	2023-03-13 18:06:43 - 29.57	2023-03-13 18:40:43 - 29.55
2023-03-13 17:33:43 - 30.16	2023-03-13 18:07:43 - 29.54	2023-03-13 18:41:43 - 29.55

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 18:42:43 - 29.56	2023-03-13 19:16:43 - 30.46	2023-03-13 19:50:43 - 30.42
2023-03-13 18:43:43 - 29.62	2023-03-13 19:17:43 - 30.43	2023-03-13 19:51:43 - 30.4
2023-03-13 18:44:43 - 29.56	2023-03-13 19:18:43 - 30.43	2023-03-13 19:52:43 - 30.26
2023-03-13 18:45:43 - 29.61	2023-03-13 19:19:43 - 30.29	2023-03-13 19:53:43 - 30.45
2023-03-13 18:46:43 - 29.5	2023-03-13 19:20:43 - 30.43	2023-03-13 19:54:43 - 30.4
2023-03-13 18:47:43 - 29.58	2023-03-13 19:21:43 - 30.41	2023-03-13 19:55:43 - 30.42
2023-03-13 18:48:43 - 29.63	2023-03-13 19:22:43 - 30.43	2023-03-13 19:56:43 - 30.42
2023-03-13 18:49:43 - 29.48	2023-03-13 19:23:43 - 30.41	2023-03-13 19:57:43 - 30.4
2023-03-13 18:50:43 - 29.64	2023-03-13 19:24:43 - 30.48	2023-03-13 19:58:43 - 30.37
2023-03-13 18:51:43 - 29.56	2023-03-13 19:25:43 - 30.4	2023-03-13 19:59:43 - 31.03
2023-03-13 18:52:43 - 29.56	2023-03-13 19:26:43 - 30.34	2023-03-13 20:00:43 - 30.68
2023-03-13 18:53:43 - 29.46	2023-03-13 19:27:43 - 30.38	2023-03-13 20:01:43 - 30.64
2023-03-13 18:54:43 - 29.69	2023-03-13 19:28:43 - 30.36	2023-03-13 20:02:43 - 30.68
2023-03-13 18:55:43 - 29.6	2023-03-13 19:29:43 - 30.35	2023-03-13 20:03:43 - 30.63
2023-03-13 18:56:43 - 29.57	2023-03-13 19:30:43 - 30.43	2023-03-13 20:04:43 - 30.7
2023-03-13 18:57:43 - 29.56	2023-03-13 19:31:43 - 30.37	2023-03-13 20:05:43 - 30.79
2023-03-13 18:58:43 - 29.57	2023-03-13 19:32:43 - 30.46	2023-03-13 20:06:43 - 30.66
2023-03-13 18:59:43 - 29.54	2023-03-13 19:33:43 - 30.44	2023-03-13 20:07:43 - 30.65
2023-03-13 19:00:43 - 30.52	2023-03-13 19:34:43 - 30.45	2023-03-13 20:08:43 - 30.58
2023-03-13 19:01:43 - 30.32	2023-03-13 19:35:43 - 30.33	2023-03-13 20:09:43 - 30.6
2023-03-13 19:02:43 - 30.38	2023-03-13 19:36:43 - 30.34	2023-03-13 20:10:43 - 30.66
2023-03-13 19:03:43 - 30.32	2023-03-13 19:37:43 - 30.37	2023-03-13 20:11:43 - 30.74
2023-03-13 19:04:43 - 30.45	2023-03-13 19:38:43 - 30.47	2023-03-13 20:12:43 - 30.64
2023-03-13 19:05:43 - 30.44	2023-03-13 19:39:43 - 30.26	2023-03-13 20:13:43 - 30.77
2023-03-13 19:06:43 - 30.39	2023-03-13 19:40:43 - 30.4	2023-03-13 20:14:43 - 30.61
2023-03-13 19:07:43 - 30.37	2023-03-13 19:41:43 - 30.4	2023-03-13 20:15:43 - 30.64
2023-03-13 19:08:43 - 30.39	2023-03-13 19:42:43 - 30.33	2023-03-13 20:16:43 - 30.63
2023-03-13 19:09:43 - 30.47	2023-03-13 19:43:43 - 30.28	2023-03-13 20:17:43 - 30.6
2023-03-13 19:10:43 - 30.39	2023-03-13 19:44:43 - 30.43	2023-03-13 20:18:43 - 30.66
2023-03-13 19:11:43 - 30.48	2023-03-13 19:45:43 - 30.39	2023-03-13 20:19:43 - 30.66
2023-03-13 19:12:43 - 30.37	2023-03-13 19:46:43 - 30.4	2023-03-13 20:20:43 - 30.66
2023-03-13 19:13:43 - 30.39	2023-03-13 19:47:43 - 30.25	2023-03-13 20:21:43 - 30.47
2023-03-13 19:14:43 - 30.28	2023-03-13 19:48:43 - 30.36	2023-03-13 20:22:43 - 30.67
2023-03-13 19:15:43 - 30.34	2023-03-13 19:49:43 - 30.38	2023-03-13 20:23:43 - 30.62

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 20:24:43 - 30.7	2023-03-13 20:58:43 - 30.54	2023-03-13 21:32:43 - 30.32
2023-03-13 20:25:43 - 30.71	2023-03-13 20:59:43 - 31.35	2023-03-13 21:33:43 - 30.3
2023-03-13 20:26:43 - 30.58	2023-03-13 21:00:43 - 30.29	2023-03-13 21:34:43 - 30.23
2023-03-13 20:27:43 - 30.58	2023-03-13 21:01:43 - 30.3	2023-03-13 21:35:43 - 30.48
2023-03-13 20:28:43 - 30.66	2023-03-13 21:02:43 - 30.29	2023-03-13 21:36:43 - 30.57
2023-03-13 20:29:43 - 30.67	2023-03-13 21:03:43 - 30.28	2023-03-13 21:37:43 - 30.24
2023-03-13 20:30:43 - 30.6	2023-03-13 21:04:43 - 30.34	2023-03-13 21:38:43 - 30.37
2023-03-13 20:31:43 - 30.74	2023-03-13 21:05:43 - 30.2	2023-03-13 21:39:43 - 30.32
2023-03-13 20:32:43 - 30.66	2023-03-13 21:06:43 - 30.23	2023-03-13 21:40:43 - 30.35
2023-03-13 20:33:43 - 30.61	2023-03-13 21:07:43 - 30.33	2023-03-13 21:41:43 - 30.31
2023-03-13 20:34:43 - 30.67	2023-03-13 21:08:43 - 30.33	2023-03-13 21:42:43 - 30.27
2023-03-13 20:35:43 - 30.64	2023-03-13 21:09:43 - 30.39	2023-03-13 21:43:43 - 30.27
2023-03-13 20:36:43 - 30.52	2023-03-13 21:10:43 - 30.3	2023-03-13 21:44:43 - 30.29
2023-03-13 20:37:43 - 30.6	2023-03-13 21:11:43 - 30.31	2023-03-13 21:45:43 - 30.27
2023-03-13 20:38:43 - 30.6	2023-03-13 21:12:43 - 30.29	2023-03-13 21:46:43 - 30.32
2023-03-13 20:39:43 - 30.73	2023-03-13 21:13:43 - 30.29	2023-03-13 21:47:43 - 30.31
2023-03-13 20:40:43 - 30.65	2023-03-13 21:14:43 - 30.34	2023-03-13 21:48:43 - 30.28
2023-03-13 20:41:43 - 30.62	2023-03-13 21:15:43 - 30.2	2023-03-13 21:49:43 - 30.3
2023-03-13 20:42:43 - 30.68	2023-03-13 21:16:43 - 30.35	2023-03-13 21:50:43 - 30.26
2023-03-13 20:43:43 - 30.46	2023-03-13 21:17:43 - 30.22	2023-03-13 21:51:43 - 30.35
2023-03-13 20:44:43 - 30.67	2023-03-13 21:18:43 - 30.27	2023-03-13 21:52:43 - 30.33
2023-03-13 20:45:43 - 30.63	2023-03-13 21:19:43 - 30.3	2023-03-13 21:53:43 - 30.29
2023-03-13 20:46:43 - 30.64	2023-03-13 21:20:43 - 30.26	2023-03-13 21:54:43 - 30.13
2023-03-13 20:47:43 - 30.63	2023-03-13 21:21:43 - 30.27	2023-03-13 21:55:43 - 30.31
2023-03-13 20:48:43 - 30.64	2023-03-13 21:22:43 - 30.29	2023-03-13 21:56:43 - 30.29
2023-03-13 20:49:43 - 30.57	2023-03-13 21:23:43 - 30.3	2023-03-13 21:57:43 - 30.3
2023-03-13 20:50:43 - 30.69	2023-03-13 21:24:43 - 30.26	2023-03-13 21:58:43 - 30.26
2023-03-13 20:51:43 - 30.63	2023-03-13 21:25:43 - 30.19	2023-03-13 21:59:43 - 30.27
2023-03-13 20:52:43 - 30.7	2023-03-13 21:26:43 - 30.32	2023-03-13 22:00:43 - 30.08
2023-03-13 20:53:43 - 30.51	2023-03-13 21:27:43 - 30.21	2023-03-13 22:01:43 - 30.05
2023-03-13 20:54:43 - 30.64	2023-03-13 21:28:43 - 30.33	2023-03-13 22:02:43 - 30.03
2023-03-13 20:55:43 - 30.64	2023-03-13 21:29:43 - 30.39	2023-03-13 22:03:43 - 29.95
2023-03-13 20:56:43 - 30.63	2023-03-13 21:30:43 - 30.39	2023-03-13 22:04:43 - 29.93
2023-03-13 20:57:43 - 30.58	2023-03-13 21:31:43 - 30.3	2023-03-13 22:05:43 - 29.96

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 22:06:43 - 29.87	2023-03-13 22:40:43 - 30.05	2023-03-13 23:14:43 - 30.24
2023-03-13 22:07:43 - 30.13	2023-03-13 22:41:43 - 29.96	2023-03-13 23:15:43 - 30.32
2023-03-13 22:08:43 - 29.82	2023-03-13 22:42:43 - 30.02	2023-03-13 23:16:43 - 30.27
2023-03-13 22:09:43 - 30.05	2023-03-13 22:43:43 - 30.06	2023-03-13 23:17:43 - 30.29
2023-03-13 22:10:43 - 29.99	2023-03-13 22:44:43 - 29.84	2023-03-13 23:18:43 - 30.2
2023-03-13 22:11:43 - 29.97	2023-03-13 22:45:43 - 30.19	2023-03-13 23:19:43 - 30.24
2023-03-13 22:12:43 - 30.01	2023-03-13 22:46:43 - 30.0	2023-03-13 23:20:43 - 30.21
2023-03-13 22:13:43 - 29.95	2023-03-13 22:47:43 - 30.02	2023-03-13 23:21:43 - 30.3
2023-03-13 22:14:43 - 29.99	2023-03-13 22:48:43 - 30.0	2023-03-13 23:22:43 - 30.2
2023-03-13 22:15:43 - 29.84	2023-03-13 22:49:43 - 30.05	2023-03-13 23:23:43 - 30.14
2023-03-13 22:16:43 - 30.01	2023-03-13 22:50:43 - 29.99	2023-03-13 23:24:43 - 30.12
2023-03-13 22:17:43 - 30.05	2023-03-13 22:51:43 - 30.08	2023-03-13 23:25:43 - 30.17
2023-03-13 22:18:43 - 30.02	2023-03-13 22:52:43 - 30.09	2023-03-13 23:26:43 - 30.19
2023-03-13 22:19:43 - 30.03	2023-03-13 22:53:43 - 30.0	2023-03-13 23:27:43 - 30.09
2023-03-13 22:20:43 - 30.01	2023-03-13 22:54:43 - 29.94	2023-03-13 23:28:43 - 30.3
2023-03-13 22:21:43 - 30.02	2023-03-13 22:55:43 - 30.02	2023-03-13 23:29:43 - 30.3
2023-03-13 22:22:43 - 30.04	2023-03-13 22:56:43 - 30.09	2023-03-13 23:30:43 - 30.24
2023-03-13 22:23:43 - 30.02	2023-03-13 22:57:43 - 30.02	2023-03-13 23:31:43 - 30.12
2023-03-13 22:24:43 - 29.98	2023-03-13 22:58:43 - 30.03	2023-03-13 23:32:43 - 30.32
2023-03-13 22:25:43 - 29.99	2023-03-13 22:59:43 - 30.68	2023-03-13 23:33:43 - 30.23
2023-03-13 22:26:43 - 29.75	2023-03-13 23:00:43 - 30.25	2023-03-13 23:34:43 - 30.15
2023-03-13 22:27:43 - 29.98	2023-03-13 23:01:43 - 30.22	2023-03-13 23:35:43 - 30.28
2023-03-13 22:28:43 - 29.91	2023-03-13 23:02:43 - 30.25	2023-03-13 23:36:43 - 30.22
2023-03-13 22:29:43 - 29.89	2023-03-13 23:03:43 - 30.24	2023-03-13 23:37:43 - 30.15
2023-03-13 22:30:43 - 29.97	2023-03-13 23:04:43 - 30.21	2023-03-13 23:38:43 - 30.33
2023-03-13 22:31:43 - 30.03	2023-03-13 23:05:43 - 30.26	2023-03-13 23:39:43 - 30.25
2023-03-13 22:32:43 - 29.91	2023-03-13 23:06:43 - 30.22	2023-03-13 23:40:43 - 30.16
2023-03-13 22:33:43 - 30.03	2023-03-13 23:07:43 - 30.27	2023-03-13 23:41:43 - 30.22
2023-03-13 22:34:43 - 30.08	2023-03-13 23:08:43 - 30.06	2023-03-13 23:42:43 - 30.25
2023-03-13 22:35:43 - 29.98	2023-03-13 23:09:43 - 30.2	2023-03-13 23:43:43 - 30.27
2023-03-13 22:36:43 - 30.07	2023-03-13 23:10:43 - 30.21	2023-03-13 23:44:43 - 30.22
2023-03-13 22:37:43 - 29.96	2023-03-13 23:11:43 - 30.19	2023-03-13 23:45:43 - 30.25
2023-03-13 22:38:43 - 30.03	2023-03-13 23:12:43 - 30.26	2023-03-13 23:46:43 - 30.24
2023-03-13 22:39:43 - 30.07	2023-03-13 23:13:43 - 30.34	2023-03-13 23:47:43 - 30.2

Horário/Leitura

2023-03-13 23:48:43 - 30.21
2023-03-13 23:49:43 - 30.3
2023-03-13 23:50:43 - 30.26
2023-03-13 23:51:43 - 30.22
2023-03-13 23:52:43 - 30.27
2023-03-13 23:53:43 - 30.19
2023-03-13 23:54:43 - 30.11
2023-03-13 23:55:43 - 30.14
2023-03-13 23:56:43 - 30.17
2023-03-13 23:57:43 - 30.21
2023-03-13 23:58:43 - 30.22
2023-03-13 23:59:43 - 30.6

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 00:00:23 - 38.06	2023-03-13 00:34:23 - 38.12	2023-03-13 01:08:23 - 38.07
2023-03-13 00:01:23 - 38.08	2023-03-13 00:35:23 - 38.21	2023-03-13 01:09:23 - 38.03
2023-03-13 00:02:23 - 38.16	2023-03-13 00:36:23 - 38.27	2023-03-13 01:10:23 - 38.05
2023-03-13 00:03:23 - 38.12	2023-03-13 00:37:23 - 38.15	2023-03-13 01:11:23 - 38.05
2023-03-13 00:04:23 - 38.11	2023-03-13 00:38:23 - 38.09	2023-03-13 01:12:23 - 37.97
2023-03-13 00:05:23 - 38.14	2023-03-13 00:39:23 - 38.15	2023-03-13 01:13:23 - 37.95
2023-03-13 00:06:23 - 38.12	2023-03-13 00:40:23 - 38.15	2023-03-13 01:14:23 - 38.03
2023-03-13 00:07:23 - 38.18	2023-03-13 00:41:23 - 38.11	2023-03-13 01:15:23 - 38.01
2023-03-13 00:08:23 - 38.16	2023-03-13 00:42:23 - 38.09	2023-03-13 01:16:23 - 37.98
2023-03-13 00:09:23 - 38.2	2023-03-13 00:43:23 - 38.07	2023-03-13 01:17:23 - 38.06
2023-03-13 00:10:23 - 38.0	2023-03-13 00:44:23 - 38.15	2023-03-13 01:18:23 - 38.08
2023-03-13 00:11:23 - 38.13	2023-03-13 00:45:23 - 38.28	2023-03-13 01:19:23 - 38.13
2023-03-13 00:12:23 - 38.06	2023-03-13 00:46:23 - 38.09	2023-03-13 01:20:23 - 37.9
2023-03-13 00:13:23 - 38.29	2023-03-13 00:47:23 - 38.14	2023-03-13 01:21:23 - 38.03
2023-03-13 00:14:23 - 38.14	2023-03-13 00:48:23 - 38.15	2023-03-13 01:22:23 - 38.02
2023-03-13 00:15:23 - 38.13	2023-03-13 00:49:23 - 38.1	2023-03-13 01:23:23 - 38.01
2023-03-13 00:16:23 - 38.18	2023-03-13 00:50:23 - 38.1	2023-03-13 01:24:23 - 38.04
2023-03-13 00:17:23 - 38.15	2023-03-13 00:51:23 - 38.1	2023-03-13 01:25:23 - 38.01
2023-03-13 00:18:23 - 38.12	2023-03-13 00:52:23 - 38.08	2023-03-13 01:26:23 - 38.22
2023-03-13 00:19:23 - 38.07	2023-03-13 00:53:23 - 38.11	2023-03-13 01:27:23 - 37.96
2023-03-13 00:20:23 - 38.07	2023-03-13 00:54:23 - 38.15	2023-03-13 01:28:23 - 38.04
2023-03-13 00:21:23 - 38.14	2023-03-13 00:55:23 - 38.16	2023-03-13 01:29:23 - 38.01
2023-03-13 00:22:23 - 38.13	2023-03-13 00:56:23 - 38.16	2023-03-13 01:30:23 - 37.91
2023-03-13 00:23:23 - 38.1	2023-03-13 00:57:23 - 38.24	2023-03-13 01:31:23 - 38.04
2023-03-13 00:24:23 - 38.09	2023-03-13 00:58:23 - 38.1	2023-03-13 01:32:23 - 38.11
2023-03-13 00:25:23 - 38.14	2023-03-13 00:59:23 - 37.71	2023-03-13 01:33:23 - 38.06
2023-03-13 00:26:23 - 38.23	2023-03-13 01:00:23 - 38.09	2023-03-13 01:34:23 - 38.04
2023-03-13 00:27:23 - 38.36	2023-03-13 01:01:23 - 38.07	2023-03-13 01:35:23 - 38.07
2023-03-13 00:28:23 - 38.09	2023-03-13 01:02:23 - 38.04	2023-03-13 01:36:23 - 37.99
2023-03-13 00:29:23 - 38.13	2023-03-13 01:03:23 - 38.0	2023-03-13 01:37:23 - 37.8
2023-03-13 00:30:23 - 38.09	2023-03-13 01:04:23 - 37.92	2023-03-13 01:38:23 - 38.06
2023-03-13 00:31:23 - 38.15	2023-03-13 01:05:23 - 38.04	2023-03-13 01:39:23 - 38.03
2023-03-13 00:32:23 - 38.13	2023-03-13 01:06:23 - 37.97	2023-03-13 01:40:23 - 37.99
2023-03-13 00:33:23 - 38.13	2023-03-13 01:07:23 - 38.07	2023-03-13 01:41:23 - 38.14

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 01:42:23 - 38.06	2023-03-13 02:16:23 - 37.87	2023-03-13 02:50:23 - 37.82
2023-03-13 01:43:23 - 38.01	2023-03-13 02:17:23 - 37.93	2023-03-13 02:51:23 - 37.9
2023-03-13 01:44:23 - 38.06	2023-03-13 02:18:23 - 37.89	2023-03-13 02:52:23 - 37.94
2023-03-13 01:45:23 - 38.01	2023-03-13 02:19:23 - 37.93	2023-03-13 02:53:23 - 37.97
2023-03-13 01:46:23 - 37.87	2023-03-13 02:20:23 - 37.75	2023-03-13 02:54:23 - 37.87
2023-03-13 01:47:23 - 37.93	2023-03-13 02:21:23 - 38.01	2023-03-13 02:55:23 - 37.94
2023-03-13 01:48:23 - 38.03	2023-03-13 02:22:23 - 38.05	2023-03-13 02:56:23 - 37.87
2023-03-13 01:49:23 - 38.09	2023-03-13 02:23:23 - 37.95	2023-03-13 02:57:23 - 37.88
2023-03-13 01:50:23 - 37.96	2023-03-13 02:24:23 - 37.89	2023-03-13 02:58:23 - 37.95
2023-03-13 01:51:23 - 38.03	2023-03-13 02:25:23 - 37.89	2023-03-13 02:59:23 - 37.36
2023-03-13 01:52:23 - 38.06	2023-03-13 02:26:23 - 37.87	2023-03-13 03:00:23 - 37.72
2023-03-13 01:53:23 - 37.97	2023-03-13 02:27:23 - 37.89	2023-03-13 03:01:23 - 37.77
2023-03-13 01:54:23 - 37.93	2023-03-13 02:28:23 - 37.91	2023-03-13 03:02:23 - 37.75
2023-03-13 01:55:23 - 38.15	2023-03-13 02:29:23 - 37.88	2023-03-13 03:03:23 - 37.74
2023-03-13 01:56:23 - 38.17	2023-03-13 02:30:23 - 37.9	2023-03-13 03:04:23 - 37.62
2023-03-13 01:57:23 - 38.02	2023-03-13 02:31:23 - 37.99	2023-03-13 03:05:23 - 37.79
2023-03-13 01:58:23 - 38.01	2023-03-13 02:32:23 - 37.9	2023-03-13 03:06:23 - 37.76
2023-03-13 01:59:23 - 38.37	2023-03-13 02:33:23 - 37.9	2023-03-13 03:07:23 - 37.99
2023-03-13 02:00:23 - 37.95	2023-03-13 02:34:23 - 37.99	2023-03-13 03:08:23 - 37.94
2023-03-13 02:01:23 - 37.79	2023-03-13 02:35:23 - 37.89	2023-03-13 03:09:23 - 37.7
2023-03-13 02:02:23 - 37.85	2023-03-13 02:36:23 - 37.75	2023-03-13 03:10:23 - 37.87
2023-03-13 02:03:23 - 37.9	2023-03-13 02:37:23 - 37.9	2023-03-13 03:11:23 - 37.68
2023-03-13 02:04:23 - 37.87	2023-03-13 02:38:23 - 37.85	2023-03-13 03:12:23 - 37.84
2023-03-13 02:05:23 - 38.02	2023-03-13 02:39:23 - 37.82	2023-03-13 03:13:23 - 37.67
2023-03-13 02:06:23 - 37.91	2023-03-13 02:40:23 - 37.98	2023-03-13 03:14:23 - 37.78
2023-03-13 02:07:23 - 37.83	2023-03-13 02:41:23 - 37.92	2023-03-13 03:15:23 - 37.73
2023-03-13 02:08:23 - 37.92	2023-03-13 02:42:23 - 37.89	2023-03-13 03:16:23 - 37.75
2023-03-13 02:09:23 - 38.01	2023-03-13 02:43:23 - 37.87	2023-03-13 03:17:23 - 37.8
2023-03-13 02:10:23 - 37.94	2023-03-13 02:44:23 - 37.88	2023-03-13 03:18:23 - 37.72
2023-03-13 02:11:23 - 37.92	2023-03-13 02:45:23 - 37.73	2023-03-13 03:19:23 - 37.77
2023-03-13 02:12:23 - 37.86	2023-03-13 02:46:23 - 37.85	2023-03-13 03:20:23 - 37.69
2023-03-13 02:13:23 - 37.91	2023-03-13 02:47:23 - 37.94	2023-03-13 03:21:23 - 37.79
2023-03-13 02:14:23 - 37.9	2023-03-13 02:48:23 - 37.88	2023-03-13 03:22:23 - 37.75
2023-03-13 02:15:23 - 37.93	2023-03-13 02:49:23 - 37.87	2023-03-13 03:23:23 - 37.88

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 03:24:23 - 37.7	2023-03-13 03:58:23 - 37.79	2023-03-13 04:32:23 - 37.46
2023-03-13 03:25:23 - 37.81	2023-03-13 03:59:23 - 37.99	2023-03-13 04:33:23 - 37.62
2023-03-13 03:26:23 - 37.81	2023-03-13 04:00:23 - 37.61	2023-03-13 04:34:23 - 37.51
2023-03-13 03:27:23 - 37.73	2023-03-13 04:01:23 - 37.59	2023-03-13 04:35:23 - 37.56
2023-03-13 03:28:23 - 37.78	2023-03-13 04:02:23 - 37.62	2023-03-13 04:36:23 - 37.66
2023-03-13 03:29:23 - 37.76	2023-03-13 04:03:23 - 37.44	2023-03-13 04:37:23 - 37.8
2023-03-13 03:30:23 - 37.76	2023-03-13 04:04:23 - 37.69	2023-03-13 04:38:23 - 37.63
2023-03-13 03:31:23 - 37.79	2023-03-13 04:05:23 - 37.69	2023-03-13 04:39:23 - 37.74
2023-03-13 03:32:23 - 37.83	2023-03-13 04:06:23 - 37.61	2023-03-13 04:40:23 - 37.68
2023-03-13 03:33:23 - 37.79	2023-03-13 04:07:23 - 37.76	2023-03-13 04:41:23 - 37.66
2023-03-13 03:34:23 - 37.76	2023-03-13 04:08:23 - 37.69	2023-03-13 04:42:23 - 37.66
2023-03-13 03:35:23 - 37.71	2023-03-13 04:09:23 - 37.63	2023-03-13 04:43:23 - 37.54
2023-03-13 03:36:23 - 37.82	2023-03-13 04:10:23 - 37.69	2023-03-13 04:44:23 - 37.62
2023-03-13 03:37:23 - 37.85	2023-03-13 04:11:23 - 37.62	2023-03-13 04:45:23 - 37.79
2023-03-13 03:38:23 - 37.8	2023-03-13 04:12:23 - 37.63	2023-03-13 04:46:23 - 37.5
2023-03-13 03:39:23 - 37.67	2023-03-13 04:13:23 - 37.62	2023-03-13 04:47:23 - 37.62
2023-03-13 03:40:23 - 37.86	2023-03-13 04:14:23 - 37.6	2023-03-13 04:48:23 - 37.61
2023-03-13 03:41:23 - 37.76	2023-03-13 04:15:23 - 37.61	2023-03-13 04:49:23 - 37.49
2023-03-13 03:42:23 - 37.74	2023-03-13 04:16:23 - 37.48	2023-03-13 04:50:23 - 37.63
2023-03-13 03:43:23 - 37.76	2023-03-13 04:17:23 - 37.64	2023-03-13 04:51:23 - 37.75
2023-03-13 03:44:23 - 37.73	2023-03-13 04:18:23 - 37.61	2023-03-13 04:52:23 - 37.7
2023-03-13 03:45:23 - 37.8	2023-03-13 04:19:23 - 37.61	2023-03-13 04:53:23 - 37.56
2023-03-13 03:46:23 - 37.75	2023-03-13 04:20:23 - 37.63	2023-03-13 04:54:23 - 37.62
2023-03-13 03:47:23 - 37.79	2023-03-13 04:21:23 - 37.6	2023-03-13 04:55:23 - 37.61
2023-03-13 03:48:23 - 37.91	2023-03-13 04:22:23 - 37.64	2023-03-13 04:56:23 - 37.59
2023-03-13 03:49:23 - 37.77	2023-03-13 04:23:23 - 37.55	2023-03-13 04:57:23 - 37.75
2023-03-13 03:50:23 - 37.86	2023-03-13 04:24:23 - 37.69	2023-03-13 04:58:23 - 37.73
2023-03-13 03:51:23 - 37.76	2023-03-13 04:25:23 - 37.6	2023-03-13 04:59:23 - 37.23
2023-03-13 03:52:23 - 37.82	2023-03-13 04:26:23 - 37.66	2023-03-13 05:00:23 - 36.97
2023-03-13 03:53:23 - 37.83	2023-03-13 04:27:23 - 37.53	2023-03-13 05:01:23 - 37.11
2023-03-13 03:54:23 - 37.83	2023-03-13 04:28:23 - 37.61	2023-03-13 05:02:23 - 37.15
2023-03-13 03:55:23 - 37.62	2023-03-13 04:29:23 - 37.63	2023-03-13 05:03:23 - 37.04
2023-03-13 03:56:23 - 37.8	2023-03-13 04:30:23 - 37.64	2023-03-13 05:04:23 - 36.89
2023-03-13 03:57:23 - 37.78	2023-03-13 04:31:23 - 37.65	2023-03-13 05:05:23 - 37.05

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 05:06:23 - 36.88	2023-03-13 05:40:23 - 37.23	2023-03-13 06:14:23 - 37.11
2023-03-13 05:07:23 - 37.05	2023-03-13 05:41:23 - 37.02	2023-03-13 06:15:23 - 37.14
2023-03-13 05:08:23 - 37.02	2023-03-13 05:42:23 - 37.03	2023-03-13 06:16:23 - 37.05
2023-03-13 05:09:23 - 37.06	2023-03-13 05:43:23 - 37.0	2023-03-13 06:17:23 - 37.11
2023-03-13 05:10:23 - 37.0	2023-03-13 05:44:23 - 36.95	2023-03-13 06:18:23 - 36.97
2023-03-13 05:11:23 - 36.99	2023-03-13 05:45:23 - 37.01	2023-03-13 06:19:23 - 36.98
2023-03-13 05:12:23 - 37.1	2023-03-13 05:46:23 - 37.07	2023-03-13 06:20:23 - 37.04
2023-03-13 05:13:23 - 36.94	2023-03-13 05:47:23 - 37.05	2023-03-13 06:21:23 - 37.11
2023-03-13 05:14:23 - 37.03	2023-03-13 05:48:23 - 37.0	2023-03-13 06:22:23 - 37.1
2023-03-13 05:15:23 - 37.11	2023-03-13 05:49:23 - 37.11	2023-03-13 06:23:23 - 37.09
2023-03-13 05:16:23 - 37.03	2023-03-13 05:50:23 - 37.02	2023-03-13 06:24:23 - 36.99
2023-03-13 05:17:23 - 37.04	2023-03-13 05:51:23 - 36.91	2023-03-13 06:25:23 - 37.06
2023-03-13 05:18:23 - 37.09	2023-03-13 05:52:23 - 37.04	2023-03-13 06:26:23 - 37.05
2023-03-13 05:19:23 - 37.04	2023-03-13 05:53:23 - 37.15	2023-03-13 06:27:23 - 37.05
2023-03-13 05:20:23 - 37.13	2023-03-13 05:54:23 - 36.91	2023-03-13 06:28:23 - 37.12
2023-03-13 05:21:23 - 37.01	2023-03-13 05:55:23 - 37.02	2023-03-13 06:29:23 - 37.02
2023-03-13 05:22:23 - 37.05	2023-03-13 05:56:23 - 37.01	2023-03-13 06:30:23 - 37.12
2023-03-13 05:23:23 - 37.04	2023-03-13 05:57:23 - 37.07	2023-03-13 06:31:23 - 36.92
2023-03-13 05:24:23 - 37.04	2023-03-13 05:58:23 - 37.06	2023-03-13 06:32:23 - 36.99
2023-03-13 05:25:23 - 37.04	2023-03-13 05:59:23 - 37.17	2023-03-13 06:33:23 - 37.01
2023-03-13 05:26:23 - 36.97	2023-03-13 06:00:23 - 37.08	2023-03-13 06:34:23 - 37.02
2023-03-13 05:27:23 - 37.04	2023-03-13 06:01:23 - 37.24	2023-03-13 06:35:23 - 37.16
2023-03-13 05:28:23 - 37.15	2023-03-13 06:02:23 - 36.92	2023-03-13 06:36:23 - 37.1
2023-03-13 05:29:23 - 37.03	2023-03-13 06:03:23 - 37.08	2023-03-13 06:37:23 - 37.03
2023-03-13 05:30:23 - 37.03	2023-03-13 06:04:23 - 36.99	2023-03-13 06:38:23 - 37.01
2023-03-13 05:31:23 - 36.94	2023-03-13 06:05:23 - 37.04	2023-03-13 06:39:23 - 37.13
2023-03-13 05:32:23 - 37.02	2023-03-13 06:06:23 - 37.07	2023-03-13 06:40:23 - 37.06
2023-03-13 05:33:23 - 36.92	2023-03-13 06:07:23 - 37.07	2023-03-13 06:41:23 - 37.06
2023-03-13 05:34:23 - 37.01	2023-03-13 06:08:23 - 37.09	2023-03-13 06:42:23 - 37.03
2023-03-13 05:35:23 - 37.19	2023-03-13 06:09:23 - 36.98	2023-03-13 06:43:23 - 37.1
2023-03-13 05:36:23 - 37.08	2023-03-13 06:10:23 - 37.03	2023-03-13 06:44:23 - 37.05
2023-03-13 05:37:23 - 36.91	2023-03-13 06:11:23 - 36.97	2023-03-13 06:45:23 - 36.91
2023-03-13 05:38:23 - 36.99	2023-03-13 06:12:23 - 37.06	2023-03-13 06:46:23 - 36.99
2023-03-13 05:39:23 - 36.79	2023-03-13 06:13:23 - 37.13	2023-03-13 06:47:23 - 37.0

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 06:48:23 - 37.07	2023-03-13 07:22:23 - 35.94	2023-03-13 07:56:23 - 36.08
2023-03-13 06:49:23 - 37.07	2023-03-13 07:23:23 - 36.09	2023-03-13 07:57:23 - 36.05
2023-03-13 06:50:23 - 37.05	2023-03-13 07:24:23 - 36.02	2023-03-13 07:58:23 - 36.11
2023-03-13 06:51:23 - 37.08	2023-03-13 07:25:23 - 36.01	2023-03-13 07:59:23 - 36.11
2023-03-13 06:52:23 - 37.15	2023-03-13 07:26:23 - 36.09	2023-03-13 08:00:23 - 34.26
2023-03-13 06:53:23 - 37.1	2023-03-13 07:27:23 - 35.96	2023-03-13 08:01:23 - 34.27
2023-03-13 06:54:23 - 37.12	2023-03-13 07:28:23 - 36.06	2023-03-13 08:02:23 - 34.4
2023-03-13 06:55:23 - 36.96	2023-03-13 07:29:23 - 35.92	2023-03-13 08:03:23 - 34.31
2023-03-13 06:56:23 - 36.9	2023-03-13 07:30:23 - 36.1	2023-03-13 08:04:23 - 34.27
2023-03-13 06:57:23 - 36.98	2023-03-13 07:31:23 - 36.03	2023-03-13 08:05:23 - 34.44
2023-03-13 06:58:23 - 37.03	2023-03-13 07:32:23 - 36.03	2023-03-13 08:06:23 - 34.32
2023-03-13 06:59:23 - 37.06	2023-03-13 07:33:23 - 36.05	2023-03-13 08:07:23 - 34.35
2023-03-13 07:00:23 - 36.03	2023-03-13 07:34:23 - 36.01	2023-03-13 08:08:23 - 34.28
2023-03-13 07:01:23 - 35.93	2023-03-13 07:35:23 - 36.03	2023-03-13 08:09:23 - 34.35
2023-03-13 07:02:23 - 36.04	2023-03-13 07:36:23 - 36.06	2023-03-13 08:10:23 - 34.35
2023-03-13 07:03:23 - 36.06	2023-03-13 07:37:23 - 36.05	2023-03-13 08:11:23 - 34.3
2023-03-13 07:04:23 - 36.18	2023-03-13 07:38:23 - 36.12	2023-03-13 08:12:23 - 34.42
2023-03-13 07:05:23 - 36.08	2023-03-13 07:39:23 - 36.0	2023-03-13 08:13:23 - 34.31
2023-03-13 07:06:23 - 36.05	2023-03-13 07:40:23 - 36.03	2023-03-13 08:14:23 - 34.34
2023-03-13 07:07:23 - 36.05	2023-03-13 07:41:23 - 35.92	2023-03-13 08:15:23 - 34.45
2023-03-13 07:08:23 - 36.11	2023-03-13 07:42:23 - 36.05	2023-03-13 08:16:23 - 34.29
2023-03-13 07:09:23 - 36.07	2023-03-13 07:43:23 - 36.04	2023-03-13 08:17:23 - 34.31
2023-03-13 07:10:23 - 36.09	2023-03-13 07:44:23 - 36.0	2023-03-13 08:18:23 - 34.34
2023-03-13 07:11:23 - 36.13	2023-03-13 07:45:23 - 36.05	2023-03-13 08:19:23 - 34.24
2023-03-13 07:12:23 - 36.08	2023-03-13 07:46:23 - 36.05	2023-03-13 08:20:23 - 34.33
2023-03-13 07:13:23 - 36.0	2023-03-13 07:47:23 - 36.05	2023-03-13 08:21:23 - 34.35
2023-03-13 07:14:23 - 36.13	2023-03-13 07:48:23 - 36.09	2023-03-13 08:22:23 - 34.3
2023-03-13 07:15:23 - 36.06	2023-03-13 07:49:23 - 36.09	2023-03-13 08:23:23 - 34.29
2023-03-13 07:16:23 - 36.09	2023-03-13 07:50:23 - 36.03	2023-03-13 08:24:23 - 34.37
2023-03-13 07:17:23 - 36.2	2023-03-13 07:51:23 - 36.05	2023-03-13 08:25:23 - 34.38
2023-03-13 07:18:23 - 35.99	2023-03-13 07:52:23 - 36.1	2023-03-13 08:26:23 - 34.37
2023-03-13 07:19:23 - 35.98	2023-03-13 07:53:23 - 36.07	2023-03-13 08:27:23 - 34.27
2023-03-13 07:20:23 - 36.03	2023-03-13 07:54:23 - 36.04	2023-03-13 08:28:23 - 34.33
2023-03-13 07:21:23 - 36.03	2023-03-13 07:55:23 - 36.0	2023-03-13 08:29:23 - 34.33

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 08:30:23 - 34.28	2023-03-13 09:04:23 - 36.16	2023-03-13 09:38:23 - 35.95
2023-03-13 08:31:23 - 34.23	2023-03-13 09:05:23 - 35.89	2023-03-13 09:39:23 - 35.79
2023-03-13 08:32:23 - 34.4	2023-03-13 09:06:23 - 35.86	2023-03-13 09:40:23 - 35.83
2023-03-13 08:33:23 - 34.29	2023-03-13 09:07:23 - 35.9	2023-03-13 09:41:23 - 35.92
2023-03-13 08:34:23 - 34.48	2023-03-13 09:08:23 - 35.93	2023-03-13 09:42:23 - 35.86
2023-03-13 08:35:23 - 34.41	2023-03-13 09:09:23 - 35.99	2023-03-13 09:43:23 - 35.88
2023-03-13 08:36:23 - 34.33	2023-03-13 09:10:23 - 35.88	2023-03-13 09:44:23 - 35.89
2023-03-13 08:37:23 - 34.43	2023-03-13 09:11:23 - 35.93	2023-03-13 09:45:23 - 35.83
2023-03-13 08:38:23 - 34.35	2023-03-13 09:12:23 - 35.83	2023-03-13 09:46:23 - 35.91
2023-03-13 08:39:23 - 34.38	2023-03-13 09:13:23 - 35.86	2023-03-13 09:47:23 - 35.82
2023-03-13 08:40:23 - 34.23	2023-03-13 09:14:23 - 35.88	2023-03-13 09:48:23 - 35.87
2023-03-13 08:41:23 - 34.34	2023-03-13 09:15:23 - 35.89	2023-03-13 09:49:23 - 35.91
2023-03-13 08:42:23 - 34.31	2023-03-13 09:16:23 - 35.91	2023-03-13 09:50:23 - 35.91
2023-03-13 08:43:23 - 34.32	2023-03-13 09:17:23 - 35.94	2023-03-13 09:51:23 - 35.91
2023-03-13 08:44:23 - 34.38	2023-03-13 09:18:23 - 35.88	2023-03-13 09:52:23 - 36.08
2023-03-13 08:45:23 - 34.29	2023-03-13 09:19:23 - 35.89	2023-03-13 09:53:23 - 35.9
2023-03-13 08:46:23 - 34.3	2023-03-13 09:20:23 - 35.92	2023-03-13 09:54:23 - 35.94
2023-03-13 08:47:23 - 34.21	2023-03-13 09:21:23 - 35.93	2023-03-13 09:55:23 - 35.9
2023-03-13 08:48:23 - 34.31	2023-03-13 09:22:23 - 35.9	2023-03-13 09:56:23 - 35.81
2023-03-13 08:49:23 - 34.33	2023-03-13 09:23:23 - 35.93	2023-03-13 09:57:23 - 35.94
2023-03-13 08:50:23 - 34.34	2023-03-13 09:24:23 - 35.9	2023-03-13 09:58:23 - 35.9
2023-03-13 08:51:23 - 34.32	2023-03-13 09:25:23 - 35.92	2023-03-13 09:59:23 - 35.66
2023-03-13 08:52:23 - 34.35	2023-03-13 09:26:23 - 35.88	2023-03-13 10:00:23 - 32.5
2023-03-13 08:53:23 - 34.34	2023-03-13 09:27:23 - 35.91	2023-03-13 10:01:23 - 32.49
2023-03-13 08:54:23 - 34.36	2023-03-13 09:28:23 - 35.9	2023-03-13 10:02:23 - 32.48
2023-03-13 08:55:23 - 34.55	2023-03-13 09:29:23 - 36.05	2023-03-13 10:03:23 - 32.54
2023-03-13 08:56:23 - 34.32	2023-03-13 09:30:23 - 35.95	2023-03-13 10:04:23 - 32.52
2023-03-13 08:57:23 - 34.29	2023-03-13 09:31:23 - 35.86	2023-03-13 10:05:23 - 32.55
2023-03-13 08:58:23 - 34.31	2023-03-13 09:32:23 - 35.88	2023-03-13 10:06:23 - 32.48
2023-03-13 08:59:23 - 34.08	2023-03-13 09:33:23 - 35.87	2023-03-13 10:07:23 - 32.46
2023-03-13 09:00:23 - 35.91	2023-03-13 09:34:23 - 35.91	2023-03-13 10:08:23 - 32.37
2023-03-13 09:01:23 - 35.89	2023-03-13 09:35:23 - 35.86	2023-03-13 10:09:23 - 32.54
2023-03-13 09:02:23 - 35.82	2023-03-13 09:36:23 - 35.92	2023-03-13 10:10:23 - 32.4
2023-03-13 09:03:23 - 35.91	2023-03-13 09:37:23 - 35.95	2023-03-13 10:11:23 - 32.48

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 10:12:23 - 32.56	2023-03-13 10:46:23 - 32.59	2023-03-13 11:20:23 - 30.98
2023-03-13 10:13:23 - 32.5	2023-03-13 10:47:23 - 32.49	2023-03-13 11:21:23 - 30.84
2023-03-13 10:14:23 - 32.52	2023-03-13 10:48:23 - 32.44	2023-03-13 11:22:23 - 30.91
2023-03-13 10:15:23 - 32.46	2023-03-13 10:49:23 - 32.46	2023-03-13 11:23:23 - 30.9
2023-03-13 10:16:23 - 32.44	2023-03-13 10:50:23 - 32.49	2023-03-13 11:24:23 - 30.95
2023-03-13 10:17:23 - 32.37	2023-03-13 10:51:23 - 32.46	2023-03-13 11:25:23 - 30.92
2023-03-13 10:18:23 - 32.44	2023-03-13 10:52:23 - 32.5	2023-03-13 11:26:23 - 31.03
2023-03-13 10:19:23 - 32.54	2023-03-13 10:53:23 - 32.4	2023-03-13 11:27:23 - 30.95
2023-03-13 10:20:23 - 32.52	2023-03-13 10:54:23 - 32.45	2023-03-13 11:28:23 - 30.95
2023-03-13 10:21:23 - 32.51	2023-03-13 10:55:23 - 32.56	2023-03-13 11:29:23 - 30.93
2023-03-13 10:22:23 - 32.48	2023-03-13 10:56:23 - 32.53	2023-03-13 11:30:23 - 30.89
2023-03-13 10:23:23 - 32.44	2023-03-13 10:57:23 - 32.35	2023-03-13 11:31:23 - 30.98
2023-03-13 10:24:23 - 32.37	2023-03-13 10:58:23 - 32.48	2023-03-13 11:32:23 - 30.87
2023-03-13 10:25:23 - 32.61	2023-03-13 10:59:23 - 32.51	2023-03-13 11:33:23 - 30.93
2023-03-13 10:26:23 - 32.41	2023-03-13 11:00:23 - 30.96	2023-03-13 11:34:23 - 30.98
2023-03-13 10:27:23 - 32.45	2023-03-13 11:01:23 - 31.05	2023-03-13 11:35:23 - 30.98
2023-03-13 10:28:23 - 32.49	2023-03-13 11:02:23 - 30.93	2023-03-13 11:36:23 - 30.96
2023-03-13 10:29:23 - 32.49	2023-03-13 11:03:23 - 30.88	2023-03-13 11:37:23 - 31.02
2023-03-13 10:30:23 - 32.46	2023-03-13 11:04:23 - 30.9	2023-03-13 11:38:23 - 30.96
2023-03-13 10:31:23 - 32.53	2023-03-13 11:05:23 - 30.9	2023-03-13 11:39:23 - 30.97
2023-03-13 10:32:23 - 32.46	2023-03-13 11:06:23 - 31.0	2023-03-13 11:40:23 - 30.99
2023-03-13 10:33:23 - 32.42	2023-03-13 11:07:23 - 30.89	2023-03-13 11:41:23 - 30.93
2023-03-13 10:34:23 - 32.48	2023-03-13 11:08:23 - 30.88	2023-03-13 11:42:23 - 30.93
2023-03-13 10:35:23 - 32.63	2023-03-13 11:09:23 - 31.1	2023-03-13 11:43:23 - 30.93
2023-03-13 10:36:23 - 32.46	2023-03-13 11:10:23 - 30.89	2023-03-13 11:44:23 - 30.95
2023-03-13 10:37:23 - 32.57	2023-03-13 11:11:23 - 30.87	2023-03-13 11:45:23 - 30.94
2023-03-13 10:38:23 - 32.61	2023-03-13 11:12:23 - 30.93	2023-03-13 11:46:23 - 31.02
2023-03-13 10:39:23 - 32.49	2023-03-13 11:13:23 - 31.03	2023-03-13 11:47:23 - 30.95
2023-03-13 10:40:23 - 32.47	2023-03-13 11:14:23 - 30.87	2023-03-13 11:48:23 - 30.95
2023-03-13 10:41:23 - 32.39	2023-03-13 11:15:23 - 30.92	2023-03-13 11:49:23 - 30.89
2023-03-13 10:42:23 - 32.5	2023-03-13 11:16:23 - 30.94	2023-03-13 11:50:23 - 30.89
2023-03-13 10:43:23 - 32.44	2023-03-13 11:17:23 - 30.96	2023-03-13 11:51:23 - 30.92
2023-03-13 10:44:23 - 32.39	2023-03-13 11:18:23 - 30.95	2023-03-13 11:52:23 - 30.79
2023-03-13 10:45:23 - 32.38	2023-03-13 11:19:23 - 30.83	2023-03-13 11:53:23 - 30.85

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 11:54:23 - 31.03	2023-03-13 12:28:23 - 32.93	2023-03-13 13:02:23 - 37.88
2023-03-13 11:55:23 - 30.91	2023-03-13 12:29:23 - 33.01	2023-03-13 13:03:23 - 37.91
2023-03-13 11:56:23 - 30.93	2023-03-13 12:30:23 - 33.06	2023-03-13 13:04:23 - 37.97
2023-03-13 11:57:23 - 30.93	2023-03-13 12:31:23 - 32.95	2023-03-13 13:05:23 - 38.05
2023-03-13 11:58:23 - 30.94	2023-03-13 12:32:23 - 32.94	2023-03-13 13:06:23 - 37.93
2023-03-13 11:59:23 - 30.56	2023-03-13 12:33:23 - 32.98	2023-03-13 13:07:23 - 38.0
2023-03-13 12:00:23 - 32.92	2023-03-13 12:34:23 - 32.84	2023-03-13 13:08:23 - 38.02
2023-03-13 12:01:23 - 32.97	2023-03-13 12:35:23 - 32.94	2023-03-13 13:09:23 - 37.87
2023-03-13 12:02:23 - 33.03	2023-03-13 12:36:23 - 32.86	2023-03-13 13:10:23 - 37.93
2023-03-13 12:03:23 - 32.99	2023-03-13 12:37:23 - 33.05	2023-03-13 13:11:23 - 37.96
2023-03-13 12:04:23 - 32.98	2023-03-13 12:38:23 - 32.99	2023-03-13 13:12:23 - 37.93
2023-03-13 12:05:23 - 33.0	2023-03-13 12:39:23 - 33.01	2023-03-13 13:13:23 - 37.97
2023-03-13 12:06:23 - 33.03	2023-03-13 12:40:23 - 32.96	2023-03-13 13:14:23 - 37.94
2023-03-13 12:07:23 - 32.95	2023-03-13 12:41:23 - 33.06	2023-03-13 13:15:23 - 37.96
2023-03-13 12:08:23 - 32.88	2023-03-13 12:42:23 - 32.95	2023-03-13 13:16:23 - 37.83
2023-03-13 12:09:23 - 32.98	2023-03-13 12:43:23 - 32.96	2023-03-13 13:17:23 - 37.97
2023-03-13 12:10:23 - 32.95	2023-03-13 12:44:23 - 33.04	2023-03-13 13:18:23 - 37.86
2023-03-13 12:11:23 - 33.06	2023-03-13 12:45:23 - 32.98	2023-03-13 13:19:23 - 37.97
2023-03-13 12:12:23 - 32.99	2023-03-13 12:46:23 - 33.03	2023-03-13 13:20:23 - 37.98
2023-03-13 12:13:23 - 32.92	2023-03-13 12:47:23 - 33.02	2023-03-13 13:21:23 - 37.9
2023-03-13 12:14:23 - 33.03	2023-03-13 12:48:23 - 32.98	2023-03-13 13:22:23 - 37.94
2023-03-13 12:15:23 - 33.06	2023-03-13 12:49:23 - 33.03	2023-03-13 13:23:23 - 37.94
2023-03-13 12:16:23 - 33.03	2023-03-13 12:50:23 - 32.97	2023-03-13 13:24:23 - 37.93
2023-03-13 12:17:23 - 33.01	2023-03-13 12:51:23 - 32.91	2023-03-13 13:25:23 - 37.93
2023-03-13 12:18:23 - 33.0	2023-03-13 12:52:23 - 33.0	2023-03-13 13:26:23 - 37.84
2023-03-13 12:19:23 - 32.91	2023-03-13 12:53:23 - 32.92	2023-03-13 13:27:23 - 37.98
2023-03-13 12:20:23 - 32.98	2023-03-13 12:54:23 - 32.94	2023-03-13 13:28:23 - 37.94
2023-03-13 12:21:23 - 32.89	2023-03-13 12:55:23 - 32.95	2023-03-13 13:29:23 - 37.95
2023-03-13 12:22:23 - 32.99	2023-03-13 12:56:23 - 32.95	2023-03-13 13:30:23 - 38.01
2023-03-13 12:23:23 - 32.94	2023-03-13 12:57:23 - 32.97	2023-03-13 13:31:23 - 37.92
2023-03-13 12:24:23 - 32.98	2023-03-13 12:58:23 - 32.92	2023-03-13 13:32:23 - 37.92
2023-03-13 12:25:23 - 33.02	2023-03-13 12:59:23 - 33.3	2023-03-13 13:33:23 - 37.91
2023-03-13 12:26:23 - 32.98	2023-03-13 13:00:23 - 37.92	2023-03-13 13:34:23 - 37.92
2023-03-13 12:27:23 - 32.91	2023-03-13 13:01:23 - 37.97	2023-03-13 13:35:23 - 37.92

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 13:36:23 - 37.95	2023-03-13 14:10:23 - 32.42	2023-03-13 14:44:23 - 32.35
2023-03-13 13:37:23 - 38.0	2023-03-13 14:11:23 - 32.39	2023-03-13 14:45:23 - 32.36
2023-03-13 13:38:23 - 37.95	2023-03-13 14:12:23 - 32.35	2023-03-13 14:46:23 - 32.35
2023-03-13 13:39:23 - 37.97	2023-03-13 14:13:23 - 32.33	2023-03-13 14:47:23 - 32.38
2023-03-13 13:40:23 - 37.9	2023-03-13 14:14:23 - 32.44	2023-03-13 14:48:23 - 32.34
2023-03-13 13:41:23 - 37.94	2023-03-13 14:15:23 - 32.45	2023-03-13 14:49:23 - 32.34
2023-03-13 13:42:23 - 38.01	2023-03-13 14:16:23 - 32.31	2023-03-13 14:50:23 - 32.33
2023-03-13 13:43:23 - 37.94	2023-03-13 14:17:23 - 32.39	2023-03-13 14:51:23 - 32.37
2023-03-13 13:44:23 - 37.94	2023-03-13 14:18:23 - 32.37	2023-03-13 14:52:23 - 32.4
2023-03-13 13:45:23 - 37.98	2023-03-13 14:19:23 - 32.3	2023-03-13 14:53:23 - 32.35
2023-03-13 13:46:23 - 37.95	2023-03-13 14:20:23 - 32.32	2023-03-13 14:54:23 - 32.35
2023-03-13 13:47:23 - 37.91	2023-03-13 14:21:23 - 32.34	2023-03-13 14:55:23 - 32.43
2023-03-13 13:48:23 - 37.9	2023-03-13 14:22:23 - 32.37	2023-03-13 14:56:23 - 32.33
2023-03-13 13:49:23 - 37.83	2023-03-13 14:23:23 - 32.37	2023-03-13 14:57:23 - 32.37
2023-03-13 13:50:23 - 37.88	2023-03-13 14:24:23 - 32.39	2023-03-13 14:58:23 - 32.26
2023-03-13 13:51:23 - 37.9	2023-03-13 14:25:23 - 32.37	2023-03-13 14:59:23 - 32.48
2023-03-13 13:52:23 - 37.9	2023-03-13 14:26:23 - 32.35	2023-03-13 15:00:23 - 28.24
2023-03-13 13:53:23 - 37.88	2023-03-13 14:27:23 - 32.48	2023-03-13 15:01:23 - 28.33
2023-03-13 13:54:23 - 37.94	2023-03-13 14:28:23 - 32.42	2023-03-13 15:02:23 - 28.25
2023-03-13 13:55:23 - 37.94	2023-03-13 14:29:23 - 32.36	2023-03-13 15:03:23 - 28.24
2023-03-13 13:56:23 - 37.96	2023-03-13 14:30:23 - 32.36	2023-03-13 15:04:23 - 28.34
2023-03-13 13:57:23 - 37.86	2023-03-13 14:31:23 - 32.38	2023-03-13 15:05:23 - 28.27
2023-03-13 13:58:23 - 37.89	2023-03-13 14:32:23 - 32.29	2023-03-13 15:06:23 - 28.38
2023-03-13 13:59:23 - 38.31	2023-03-13 14:33:23 - 32.35	2023-03-13 15:07:23 - 28.4
2023-03-13 14:00:23 - 32.43	2023-03-13 14:34:23 - 32.35	2023-03-13 15:08:23 - 28.26
2023-03-13 14:01:23 - 32.48	2023-03-13 14:35:23 - 32.31	2023-03-13 15:09:23 - 28.45
2023-03-13 14:02:23 - 32.39	2023-03-13 14:36:23 - 32.37	2023-03-13 15:10:23 - 28.32
2023-03-13 14:03:23 - 32.39	2023-03-13 14:37:23 - 32.44	2023-03-13 15:11:23 - 28.26
2023-03-13 14:04:23 - 32.35	2023-03-13 14:38:23 - 32.38	2023-03-13 15:12:23 - 28.19
2023-03-13 14:05:23 - 32.4	2023-03-13 14:39:23 - 32.34	2023-03-13 15:13:23 - 28.1
2023-03-13 14:06:23 - 32.26	2023-03-13 14:40:23 - 32.4	2023-03-13 15:14:23 - 28.29
2023-03-13 14:07:23 - 32.38	2023-03-13 14:41:23 - 32.39	2023-03-13 15:15:23 - 28.25
2023-03-13 14:08:23 - 32.39	2023-03-13 14:42:23 - 32.36	2023-03-13 15:16:23 - 28.35
2023-03-13 14:09:23 - 32.35	2023-03-13 14:43:23 - 32.37	2023-03-13 15:17:23 - 28.28

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 15:18:23 - 28.3	2023-03-13 15:52:23 - 28.2	2023-03-13 16:26:23 - 35.37
2023-03-13 15:19:23 - 28.4	2023-03-13 15:53:23 - 28.24	2023-03-13 16:27:23 - 35.11
2023-03-13 15:20:23 - 28.17	2023-03-13 15:54:23 - 28.31	2023-03-13 16:28:23 - 35.3
2023-03-13 15:21:23 - 28.34	2023-03-13 15:55:23 - 28.3	2023-03-13 16:29:23 - 35.25
2023-03-13 15:22:23 - 28.26	2023-03-13 15:56:23 - 28.36	2023-03-13 16:30:23 - 35.34
2023-03-13 15:23:23 - 28.29	2023-03-13 15:57:23 - 28.2	2023-03-13 16:31:23 - 35.36
2023-03-13 15:24:23 - 28.27	2023-03-13 15:58:23 - 28.28	2023-03-13 16:32:23 - 35.39
2023-03-13 15:25:23 - 28.3	2023-03-13 15:59:23 - 27.98	2023-03-13 16:33:23 - 35.32
2023-03-13 15:26:23 - 28.23	2023-03-13 16:00:23 - 35.36	2023-03-13 16:34:23 - 35.27
2023-03-13 15:27:23 - 28.21	2023-03-13 16:01:23 - 35.36	2023-03-13 16:35:23 - 35.35
2023-03-13 15:28:23 - 28.34	2023-03-13 16:02:23 - 35.25	2023-03-13 16:36:23 - 35.32
2023-03-13 15:29:23 - 28.24	2023-03-13 16:03:23 - 35.34	2023-03-13 16:37:23 - 35.32
2023-03-13 15:30:23 - 28.23	2023-03-13 16:04:23 - 35.31	2023-03-13 16:38:23 - 35.25
2023-03-13 15:31:23 - 28.29	2023-03-13 16:05:23 - 35.34	2023-03-13 16:39:23 - 35.35
2023-03-13 15:32:23 - 28.3	2023-03-13 16:06:23 - 35.33	2023-03-13 16:40:23 - 35.33
2023-03-13 15:33:23 - 28.27	2023-03-13 16:07:23 - 35.32	2023-03-13 16:41:23 - 35.38
2023-03-13 15:34:23 - 28.27	2023-03-13 16:08:23 - 35.39	2023-03-13 16:42:23 - 35.39
2023-03-13 15:35:23 - 28.28	2023-03-13 16:09:23 - 35.31	2023-03-13 16:43:23 - 35.34
2023-03-13 15:36:23 - 28.31	2023-03-13 16:10:23 - 35.33	2023-03-13 16:44:23 - 35.39
2023-03-13 15:37:23 - 28.14	2023-03-13 16:11:23 - 35.26	2023-03-13 16:45:23 - 35.33
2023-03-13 15:38:23 - 28.22	2023-03-13 16:12:23 - 35.32	2023-03-13 16:46:23 - 35.4
2023-03-13 15:39:23 - 28.26	2023-03-13 16:13:23 - 35.33	2023-03-13 16:47:23 - 35.27
2023-03-13 15:40:23 - 28.2	2023-03-13 16:14:23 - 35.33	2023-03-13 16:48:23 - 35.36
2023-03-13 15:41:23 - 28.22	2023-03-13 16:15:23 - 35.3	2023-03-13 16:49:23 - 35.33
2023-03-13 15:42:23 - 28.27	2023-03-13 16:16:23 - 35.28	2023-03-13 16:50:23 - 35.32
2023-03-13 15:43:23 - 28.26	2023-03-13 16:17:23 - 35.31	2023-03-13 16:51:23 - 35.24
2023-03-13 15:44:23 - 28.13	2023-03-13 16:18:23 - 35.33	2023-03-13 16:52:23 - 35.28
2023-03-13 15:45:23 - 28.31	2023-03-13 16:19:23 - 35.36	2023-03-13 16:53:23 - 35.34
2023-03-13 15:46:23 - 28.31	2023-03-13 16:20:23 - 35.37	2023-03-13 16:54:23 - 35.21
2023-03-13 15:47:23 - 28.43	2023-03-13 16:21:23 - 35.25	2023-03-13 16:55:23 - 35.41
2023-03-13 15:48:23 - 28.34	2023-03-13 16:22:23 - 35.36	2023-03-13 16:56:23 - 35.21
2023-03-13 15:49:23 - 28.27	2023-03-13 16:23:23 - 35.34	2023-03-13 16:57:23 - 35.35
2023-03-13 15:50:23 - 28.2	2023-03-13 16:24:23 - 35.46	2023-03-13 16:58:23 - 35.33
2023-03-13 15:51:23 - 28.28	2023-03-13 16:25:23 - 35.32	2023-03-13 16:59:23 - 35.72

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 17:00:23 - 37.46	2023-03-13 17:34:23 - 37.48	2023-03-13 18:08:23 - 36.76
2023-03-13 17:01:23 - 37.45	2023-03-13 17:35:23 - 37.55	2023-03-13 18:09:23 - 36.78
2023-03-13 17:02:23 - 37.28	2023-03-13 17:36:23 - 37.5	2023-03-13 18:10:23 - 36.78
2023-03-13 17:03:23 - 37.49	2023-03-13 17:37:23 - 37.44	2023-03-13 18:11:23 - 36.76
2023-03-13 17:04:23 - 37.47	2023-03-13 17:38:23 - 37.56	2023-03-13 18:12:23 - 36.79
2023-03-13 17:05:23 - 37.55	2023-03-13 17:39:23 - 37.51	2023-03-13 18:13:23 - 36.76
2023-03-13 17:06:23 - 37.36	2023-03-13 17:40:23 - 37.44	2023-03-13 18:14:23 - 36.79
2023-03-13 17:07:23 - 37.48	2023-03-13 17:41:23 - 37.59	2023-03-13 18:15:23 - 36.79
2023-03-13 17:08:23 - 37.42	2023-03-13 17:42:23 - 37.44	2023-03-13 18:16:23 - 36.8
2023-03-13 17:09:23 - 37.4	2023-03-13 17:43:23 - 37.56	2023-03-13 18:17:23 - 36.81
2023-03-13 17:10:23 - 37.43	2023-03-13 17:44:23 - 37.47	2023-03-13 18:18:23 - 36.82
2023-03-13 17:11:23 - 37.38	2023-03-13 17:45:23 - 37.27	2023-03-13 18:19:23 - 36.78
2023-03-13 17:12:23 - 37.57	2023-03-13 17:46:23 - 37.57	2023-03-13 18:20:23 - 36.67
2023-03-13 17:13:23 - 37.44	2023-03-13 17:47:23 - 37.45	2023-03-13 18:21:23 - 36.65
2023-03-13 17:14:23 - 37.49	2023-03-13 17:48:23 - 37.41	2023-03-13 18:22:23 - 36.8
2023-03-13 17:15:23 - 37.47	2023-03-13 17:49:23 - 37.46	2023-03-13 18:23:23 - 36.76
2023-03-13 17:16:23 - 37.46	2023-03-13 17:50:23 - 37.53	2023-03-13 18:24:23 - 36.78
2023-03-13 17:17:23 - 37.44	2023-03-13 17:51:23 - 37.47	2023-03-13 18:25:23 - 36.83
2023-03-13 17:18:23 - 37.44	2023-03-13 17:52:23 - 37.65	2023-03-13 18:26:23 - 36.83
2023-03-13 17:19:23 - 37.51	2023-03-13 17:53:23 - 37.54	2023-03-13 18:27:23 - 36.77
2023-03-13 17:20:23 - 37.45	2023-03-13 17:54:23 - 37.49	2023-03-13 18:28:23 - 36.76
2023-03-13 17:21:23 - 37.5	2023-03-13 17:55:23 - 37.48	2023-03-13 18:29:23 - 36.7
2023-03-13 17:22:23 - 37.42	2023-03-13 17:56:23 - 37.45	2023-03-13 18:30:23 - 36.83
2023-03-13 17:23:23 - 37.5	2023-03-13 17:57:23 - 37.49	2023-03-13 18:31:23 - 36.75
2023-03-13 17:24:23 - 37.52	2023-03-13 17:58:23 - 37.43	2023-03-13 18:32:23 - 36.79
2023-03-13 17:25:23 - 37.28	2023-03-13 17:59:23 - 37.69	2023-03-13 18:33:23 - 36.74
2023-03-13 17:26:23 - 37.47	2023-03-13 18:00:23 - 36.83	2023-03-13 18:34:23 - 36.87
2023-03-13 17:27:23 - 37.41	2023-03-13 18:01:23 - 36.82	2023-03-13 18:35:23 - 36.8
2023-03-13 17:28:23 - 37.51	2023-03-13 18:02:23 - 36.83	2023-03-13 18:36:23 - 36.78
2023-03-13 17:29:23 - 37.46	2023-03-13 18:03:23 - 36.8	2023-03-13 18:37:23 - 36.61
2023-03-13 17:30:23 - 37.5	2023-03-13 18:04:23 - 36.81	2023-03-13 18:38:23 - 36.82
2023-03-13 17:31:23 - 37.44	2023-03-13 18:05:23 - 36.65	2023-03-13 18:39:23 - 36.73
2023-03-13 17:32:23 - 37.37	2023-03-13 18:06:23 - 36.66	2023-03-13 18:40:23 - 36.8
2023-03-13 17:33:23 - 37.42	2023-03-13 18:07:23 - 36.79	2023-03-13 18:41:23 - 36.86

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 18:42:23 - 36.84	2023-03-13 19:16:23 - 37.61	2023-03-13 19:50:23 - 37.6
2023-03-13 18:43:23 - 36.72	2023-03-13 19:17:23 - 37.55	2023-03-13 19:51:23 - 37.6
2023-03-13 18:44:23 - 36.78	2023-03-13 19:18:23 - 37.56	2023-03-13 19:52:23 - 37.63
2023-03-13 18:45:23 - 36.79	2023-03-13 19:19:23 - 37.61	2023-03-13 19:53:23 - 37.54
2023-03-13 18:46:23 - 36.84	2023-03-13 19:20:23 - 37.58	2023-03-13 19:54:23 - 37.67
2023-03-13 18:47:23 - 36.77	2023-03-13 19:21:23 - 37.64	2023-03-13 19:55:23 - 37.48
2023-03-13 18:48:23 - 36.76	2023-03-13 19:22:23 - 37.5	2023-03-13 19:56:23 - 37.55
2023-03-13 18:49:23 - 36.91	2023-03-13 19:23:23 - 37.58	2023-03-13 19:57:23 - 37.61
2023-03-13 18:50:23 - 36.78	2023-03-13 19:24:23 - 37.65	2023-03-13 19:58:23 - 37.61
2023-03-13 18:51:23 - 36.81	2023-03-13 19:25:23 - 37.55	2023-03-13 19:59:23 - 37.3
2023-03-13 18:52:23 - 36.81	2023-03-13 19:26:23 - 37.57	2023-03-13 20:00:23 - 37.55
2023-03-13 18:53:23 - 36.67	2023-03-13 19:27:23 - 37.62	2023-03-13 20:01:23 - 37.55
2023-03-13 18:54:23 - 36.75	2023-03-13 19:28:23 - 37.53	2023-03-13 20:02:23 - 37.54
2023-03-13 18:55:23 - 36.77	2023-03-13 19:29:23 - 37.61	2023-03-13 20:03:23 - 37.51
2023-03-13 18:56:23 - 36.79	2023-03-13 19:30:23 - 37.59	2023-03-13 20:04:23 - 37.55
2023-03-13 18:57:23 - 36.77	2023-03-13 19:31:23 - 37.59	2023-03-13 20:05:23 - 37.58
2023-03-13 18:58:23 - 36.87	2023-03-13 19:32:23 - 37.6	2023-03-13 20:06:23 - 37.57
2023-03-13 18:59:23 - 37.44	2023-03-13 19:33:23 - 37.61	2023-03-13 20:07:23 - 37.61
2023-03-13 19:00:23 - 37.64	2023-03-13 19:34:23 - 37.62	2023-03-13 20:08:23 - 37.63
2023-03-13 19:01:23 - 37.61	2023-03-13 19:35:23 - 37.68	2023-03-13 20:09:23 - 37.54
2023-03-13 19:02:23 - 37.63	2023-03-13 19:36:23 - 37.6	2023-03-13 20:10:23 - 37.57
2023-03-13 19:03:23 - 37.44	2023-03-13 19:37:23 - 37.63	2023-03-13 20:11:23 - 37.47
2023-03-13 19:04:23 - 37.72	2023-03-13 19:38:23 - 37.76	2023-03-13 20:12:23 - 37.53
2023-03-13 19:05:23 - 37.52	2023-03-13 19:39:23 - 37.45	2023-03-13 20:13:23 - 37.53
2023-03-13 19:06:23 - 37.55	2023-03-13 19:40:23 - 37.57	2023-03-13 20:14:23 - 37.56
2023-03-13 19:07:23 - 37.57	2023-03-13 19:41:23 - 37.48	2023-03-13 20:15:23 - 37.58
2023-03-13 19:08:23 - 37.61	2023-03-13 19:42:23 - 37.6	2023-03-13 20:16:23 - 37.49
2023-03-13 19:09:23 - 37.53	2023-03-13 19:43:23 - 37.58	2023-03-13 20:17:23 - 37.5
2023-03-13 19:10:23 - 37.69	2023-03-13 19:44:23 - 37.58	2023-03-13 20:18:23 - 37.56
2023-03-13 19:11:23 - 37.67	2023-03-13 19:45:23 - 37.66	2023-03-13 20:19:23 - 37.69
2023-03-13 19:12:23 - 37.6	2023-03-13 19:46:23 - 37.56	2023-03-13 20:20:23 - 37.58
2023-03-13 19:13:23 - 37.66	2023-03-13 19:47:23 - 37.65	2023-03-13 20:21:23 - 37.55
2023-03-13 19:14:23 - 37.59	2023-03-13 19:48:23 - 37.58	2023-03-13 20:22:23 - 37.63
2023-03-13 19:15:23 - 37.67	2023-03-13 19:49:23 - 37.56	2023-03-13 20:23:23 - 37.64

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 20:24:23 - 37.55	2023-03-13 20:58:23 - 37.69	2023-03-13 21:32:23 - 37.4
2023-03-13 20:25:23 - 37.56	2023-03-13 20:59:23 - 37.09	2023-03-13 21:33:23 - 37.47
2023-03-13 20:26:23 - 37.57	2023-03-13 21:00:23 - 37.48	2023-03-13 21:34:23 - 37.5
2023-03-13 20:27:23 - 37.62	2023-03-13 21:01:23 - 37.45	2023-03-13 21:35:23 - 37.42
2023-03-13 20:28:23 - 37.55	2023-03-13 21:02:23 - 37.45	2023-03-13 21:36:23 - 37.45
2023-03-13 20:29:23 - 37.56	2023-03-13 21:03:23 - 37.41	2023-03-13 21:37:23 - 37.42
2023-03-13 20:30:23 - 37.58	2023-03-13 21:04:23 - 37.42	2023-03-13 21:38:23 - 37.43
2023-03-13 20:31:23 - 37.57	2023-03-13 21:05:23 - 37.44	2023-03-13 21:39:23 - 37.4
2023-03-13 20:32:23 - 37.63	2023-03-13 21:06:23 - 37.46	2023-03-13 21:40:23 - 37.38
2023-03-13 20:33:23 - 37.59	2023-03-13 21:07:23 - 37.48	2023-03-13 21:41:23 - 37.48
2023-03-13 20:34:23 - 37.71	2023-03-13 21:08:23 - 37.39	2023-03-13 21:42:23 - 37.39
2023-03-13 20:35:23 - 37.58	2023-03-13 21:09:23 - 37.53	2023-03-13 21:43:23 - 37.43
2023-03-13 20:36:23 - 37.57	2023-03-13 21:10:23 - 37.45	2023-03-13 21:44:23 - 37.41
2023-03-13 20:37:23 - 37.62	2023-03-13 21:11:23 - 37.45	2023-03-13 21:45:23 - 37.52
2023-03-13 20:38:23 - 37.57	2023-03-13 21:12:23 - 37.48	2023-03-13 21:46:23 - 37.43
2023-03-13 20:39:23 - 37.52	2023-03-13 21:13:23 - 37.35	2023-03-13 21:47:23 - 37.45
2023-03-13 20:40:23 - 37.72	2023-03-13 21:14:23 - 37.45	2023-03-13 21:48:23 - 37.39
2023-03-13 20:41:23 - 37.56	2023-03-13 21:15:23 - 37.43	2023-03-13 21:49:23 - 37.54
2023-03-13 20:42:23 - 37.53	2023-03-13 21:16:23 - 37.49	2023-03-13 21:50:23 - 37.55
2023-03-13 20:43:23 - 37.56	2023-03-13 21:17:23 - 37.43	2023-03-13 21:51:23 - 37.46
2023-03-13 20:44:23 - 37.52	2023-03-13 21:18:23 - 37.4	2023-03-13 21:52:23 - 37.47
2023-03-13 20:45:23 - 37.58	2023-03-13 21:19:23 - 37.45	2023-03-13 21:53:23 - 37.45
2023-03-13 20:46:23 - 37.57	2023-03-13 21:20:23 - 37.35	2023-03-13 21:54:23 - 37.55
2023-03-13 20:47:23 - 37.55	2023-03-13 21:21:23 - 37.46	2023-03-13 21:55:23 - 37.43
2023-03-13 20:48:23 - 37.68	2023-03-13 21:22:23 - 37.34	2023-03-13 21:56:23 - 37.45
2023-03-13 20:49:23 - 37.56	2023-03-13 21:23:23 - 37.5	2023-03-13 21:57:23 - 37.48
2023-03-13 20:50:23 - 37.58	2023-03-13 21:24:23 - 37.45	2023-03-13 21:58:23 - 37.44
2023-03-13 20:51:23 - 37.47	2023-03-13 21:25:23 - 37.38	2023-03-13 21:59:23 - 37.5
2023-03-13 20:52:23 - 37.51	2023-03-13 21:26:23 - 37.51	2023-03-13 22:00:23 - 37.19
2023-03-13 20:53:23 - 37.51	2023-03-13 21:27:23 - 37.22	2023-03-13 22:01:23 - 37.15
2023-03-13 20:54:23 - 37.58	2023-03-13 21:28:23 - 37.42	2023-03-13 22:02:23 - 37.24
2023-03-13 20:55:23 - 37.35	2023-03-13 21:29:23 - 37.54	2023-03-13 22:03:23 - 37.22
2023-03-13 20:56:23 - 37.56	2023-03-13 21:30:23 - 37.37	2023-03-13 22:04:23 - 37.16
2023-03-13 20:57:23 - 37.54	2023-03-13 21:31:23 - 37.31	2023-03-13 22:05:23 - 37.3

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 22:06:23 - 37.2	2023-03-13 22:40:23 - 37.16	2023-03-13 23:14:23 - 36.58
2023-03-13 22:07:23 - 37.24	2023-03-13 22:41:23 - 37.25	2023-03-13 23:15:23 - 36.67
2023-03-13 22:08:23 - 37.26	2023-03-13 22:42:23 - 37.18	2023-03-13 23:16:23 - 36.62
2023-03-13 22:09:23 - 37.14	2023-03-13 22:43:23 - 37.17	2023-03-13 23:17:23 - 36.65
2023-03-13 22:10:23 - 37.19	2023-03-13 22:44:23 - 37.12	2023-03-13 23:18:23 - 36.59
2023-03-13 22:11:23 - 37.2	2023-03-13 22:45:23 - 37.22	2023-03-13 23:19:23 - 36.67
2023-03-13 22:12:23 - 37.21	2023-03-13 22:46:23 - 37.13	2023-03-13 23:20:23 - 36.68
2023-03-13 22:13:23 - 36.98	2023-03-13 22:47:23 - 37.24	2023-03-13 23:21:23 - 36.67
2023-03-13 22:14:23 - 37.18	2023-03-13 22:48:23 - 37.29	2023-03-13 23:22:23 - 36.66
2023-03-13 22:15:23 - 37.18	2023-03-13 22:49:23 - 37.2	2023-03-13 23:23:23 - 36.66
2023-03-13 22:16:23 - 37.29	2023-03-13 22:50:23 - 37.15	2023-03-13 23:24:23 - 36.71
2023-03-13 22:17:23 - 37.35	2023-03-13 22:51:23 - 37.22	2023-03-13 23:25:23 - 36.68
2023-03-13 22:18:23 - 37.15	2023-03-13 22:52:23 - 37.18	2023-03-13 23:26:23 - 36.61
2023-03-13 22:19:23 - 37.18	2023-03-13 22:53:23 - 37.2	2023-03-13 23:27:23 - 36.66
2023-03-13 22:20:23 - 37.22	2023-03-13 22:54:23 - 37.16	2023-03-13 23:28:23 - 36.75
2023-03-13 22:21:23 - 37.06	2023-03-13 22:55:23 - 37.27	2023-03-13 23:29:23 - 36.58
2023-03-13 22:22:23 - 37.31	2023-03-13 22:56:23 - 37.18	2023-03-13 23:30:23 - 36.71
2023-03-13 22:23:23 - 37.14	2023-03-13 22:57:23 - 37.2	2023-03-13 23:31:23 - 36.71
2023-03-13 22:24:23 - 37.19	2023-03-13 22:58:23 - 37.45	2023-03-13 23:32:23 - 36.73
2023-03-13 22:25:23 - 37.17	2023-03-13 22:59:23 - 36.44	2023-03-13 23:33:23 - 36.68
2023-03-13 22:26:23 - 36.99	2023-03-13 23:00:23 - 36.66	2023-03-13 23:34:23 - 36.65
2023-03-13 22:27:23 - 37.12	2023-03-13 23:01:23 - 36.67	2023-03-13 23:35:23 - 36.76
2023-03-13 22:28:23 - 37.18	2023-03-13 23:02:23 - 36.64	2023-03-13 23:36:23 - 36.66
2023-03-13 22:29:23 - 37.16	2023-03-13 23:03:23 - 36.74	2023-03-13 23:37:23 - 36.7
2023-03-13 22:30:23 - 37.12	2023-03-13 23:04:23 - 36.72	2023-03-13 23:38:23 - 36.65
2023-03-13 22:31:23 - 37.22	2023-03-13 23:05:23 - 36.64	2023-03-13 23:39:23 - 36.6
2023-03-13 22:32:23 - 37.19	2023-03-13 23:06:23 - 36.71	2023-03-13 23:40:23 - 36.71
2023-03-13 22:33:23 - 37.3	2023-03-13 23:07:23 - 36.65	2023-03-13 23:41:23 - 36.61
2023-03-13 22:34:23 - 37.15	2023-03-13 23:08:23 - 36.71	2023-03-13 23:42:23 - 36.63
2023-03-13 22:35:23 - 37.18	2023-03-13 23:09:23 - 36.7	2023-03-13 23:43:23 - 36.64
2023-03-13 22:36:23 - 37.16	2023-03-13 23:10:23 - 36.64	2023-03-13 23:44:23 - 36.78
2023-03-13 22:37:23 - 37.09	2023-03-13 23:11:23 - 36.72	2023-03-13 23:45:23 - 36.65
2023-03-13 22:38:23 - 37.21	2023-03-13 23:12:23 - 36.6	2023-03-13 23:46:23 - 36.67
2023-03-13 22:39:23 - 37.21	2023-03-13 23:13:23 - 36.66	2023-03-13 23:47:23 - 36.7

Horário/Leitura

2023-03-13 23:48:23 - 36.67
2023-03-13 23:49:23 - 36.66
2023-03-13 23:50:23 - 36.63
2023-03-13 23:51:23 - 36.64
2023-03-13 23:52:23 - 36.63
2023-03-13 23:53:23 - 36.64
2023-03-13 23:54:23 - 36.68
2023-03-13 23:55:23 - 36.65
2023-03-13 23:56:23 - 36.73
2023-03-13 23:57:23 - 36.65
2023-03-13 23:58:23 - 36.71
2023-03-13 23:59:23 - 36.15

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 00:00:38 - 39.34	2023-03-13 00:34:38 - 39.35	2023-03-13 01:08:38 - 39.44
2023-03-13 00:01:38 - 39.35	2023-03-13 00:35:38 - 39.3	2023-03-13 01:09:38 - 39.44
2023-03-13 00:02:38 - 39.35	2023-03-13 00:36:38 - 39.32	2023-03-13 01:10:38 - 39.43
2023-03-13 00:03:38 - 39.33	2023-03-13 00:37:38 - 39.32	2023-03-13 01:11:38 - 39.41
2023-03-13 00:04:38 - 39.4	2023-03-13 00:38:38 - 39.37	2023-03-13 01:12:38 - 39.42
2023-03-13 00:05:38 - 39.28	2023-03-13 00:39:38 - 39.33	2023-03-13 01:13:38 - 39.42
2023-03-13 00:06:38 - 39.32	2023-03-13 00:40:38 - 39.32	2023-03-13 01:14:38 - 39.42
2023-03-13 00:07:38 - 39.24	2023-03-13 00:41:38 - 39.33	2023-03-13 01:15:38 - 39.41
2023-03-13 00:08:38 - 39.47	2023-03-13 00:42:38 - 39.28	2023-03-13 01:16:38 - 39.44
2023-03-13 00:09:38 - 39.35	2023-03-13 00:43:38 - 39.21	2023-03-13 01:17:38 - 39.45
2023-03-13 00:10:38 - 39.3	2023-03-13 00:44:38 - 39.31	2023-03-13 01:18:38 - 39.45
2023-03-13 00:11:38 - 39.31	2023-03-13 00:45:38 - 39.23	2023-03-13 01:19:38 - 39.44
2023-03-13 00:12:38 - 39.3	2023-03-13 00:46:38 - 39.34	2023-03-13 01:20:38 - 39.46
2023-03-13 00:13:38 - 39.32	2023-03-13 00:47:38 - 39.29	2023-03-13 01:21:38 - 39.48
2023-03-13 00:14:38 - 39.36	2023-03-13 00:48:38 - 39.24	2023-03-13 01:22:38 - 39.54
2023-03-13 00:15:38 - 39.28	2023-03-13 00:49:38 - 39.3	2023-03-13 01:23:38 - 39.47
2023-03-13 00:16:38 - 39.23	2023-03-13 00:50:38 - 39.13	2023-03-13 01:24:38 - 39.38
2023-03-13 00:17:38 - 39.36	2023-03-13 00:51:38 - 39.28	2023-03-13 01:25:38 - 39.42
2023-03-13 00:18:38 - 39.32	2023-03-13 00:52:38 - 39.44	2023-03-13 01:26:38 - 39.42
2023-03-13 00:19:38 - 39.32	2023-03-13 00:53:38 - 39.28	2023-03-13 01:27:38 - 39.48
2023-03-13 00:20:38 - 39.35	2023-03-13 00:54:38 - 39.37	2023-03-13 01:28:38 - 39.44
2023-03-13 00:21:38 - 39.34	2023-03-13 00:55:38 - 39.37	2023-03-13 01:29:38 - 39.37
2023-03-13 00:22:38 - 39.19	2023-03-13 00:56:38 - 39.18	2023-03-13 01:30:38 - 39.45
2023-03-13 00:23:38 - 39.18	2023-03-13 00:57:38 - 39.29	2023-03-13 01:31:38 - 39.51
2023-03-13 00:24:38 - 39.44	2023-03-13 00:58:38 - 39.39	2023-03-13 01:32:38 - 39.43
2023-03-13 00:25:38 - 39.27	2023-03-13 00:59:38 - 39.59	2023-03-13 01:33:38 - 39.47
2023-03-13 00:26:38 - 39.35	2023-03-13 01:00:38 - 39.39	2023-03-13 01:34:38 - 39.45
2023-03-13 00:27:38 - 39.31	2023-03-13 01:01:38 - 39.53	2023-03-13 01:35:38 - 39.45
2023-03-13 00:28:38 - 39.46	2023-03-13 01:02:38 - 39.5	2023-03-13 01:36:38 - 39.44
2023-03-13 00:29:38 - 39.33	2023-03-13 01:03:38 - 39.48	2023-03-13 01:37:38 - 39.4
2023-03-13 00:30:38 - 39.11	2023-03-13 01:04:38 - 39.49	2023-03-13 01:38:38 - 39.33
2023-03-13 00:31:38 - 39.36	2023-03-13 01:05:38 - 39.42	2023-03-13 01:39:38 - 39.45
2023-03-13 00:32:38 - 39.34	2023-03-13 01:06:38 - 39.45	2023-03-13 01:40:38 - 39.44
2023-03-13 00:33:38 - 39.46	2023-03-13 01:07:38 - 39.48	2023-03-13 01:41:38 - 39.49

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 01:42:38 - 39.44	2023-03-13 02:16:38 - 39.33	2023-03-13 02:50:38 - 39.27
2023-03-13 01:43:38 - 39.45	2023-03-13 02:17:38 - 39.33	2023-03-13 02:51:38 - 39.3
2023-03-13 01:44:38 - 39.45	2023-03-13 02:18:38 - 39.31	2023-03-13 02:52:38 - 39.26
2023-03-13 01:45:38 - 39.43	2023-03-13 02:19:38 - 39.33	2023-03-13 02:53:38 - 39.3
2023-03-13 01:46:38 - 39.42	2023-03-13 02:20:38 - 39.15	2023-03-13 02:54:38 - 39.28
2023-03-13 01:47:38 - 39.44	2023-03-13 02:21:38 - 39.27	2023-03-13 02:55:38 - 39.4
2023-03-13 01:48:38 - 39.39	2023-03-13 02:22:38 - 39.33	2023-03-13 02:56:38 - 39.39
2023-03-13 01:49:38 - 39.44	2023-03-13 02:23:38 - 39.28	2023-03-13 02:57:38 - 39.21
2023-03-13 01:50:38 - 39.48	2023-03-13 02:24:38 - 39.29	2023-03-13 02:58:38 - 39.41
2023-03-13 01:51:38 - 39.48	2023-03-13 02:25:38 - 39.36	2023-03-13 02:59:38 - 39.27
2023-03-13 01:52:38 - 39.43	2023-03-13 02:26:38 - 39.3	2023-03-13 03:00:38 - 39.13
2023-03-13 01:53:38 - 39.45	2023-03-13 02:27:38 - 39.34	2023-03-13 03:01:38 - 38.95
2023-03-13 01:54:38 - 39.43	2023-03-13 02:28:38 - 39.3	2023-03-13 03:02:38 - 38.93
2023-03-13 01:55:38 - 39.48	2023-03-13 02:29:38 - 39.17	2023-03-13 03:03:38 - 39.06
2023-03-13 01:56:38 - 39.36	2023-03-13 02:30:38 - 39.3	2023-03-13 03:04:38 - 38.99
2023-03-13 01:57:38 - 39.44	2023-03-13 02:31:38 - 39.31	2023-03-13 03:05:38 - 39.08
2023-03-13 01:58:38 - 39.47	2023-03-13 02:32:38 - 39.26	2023-03-13 03:06:38 - 38.99
2023-03-13 01:59:38 - 39.26	2023-03-13 02:33:38 - 39.4	2023-03-13 03:07:38 - 39.09
2023-03-13 02:00:38 - 39.29	2023-03-13 02:34:38 - 39.33	2023-03-13 03:08:38 - 39.04
2023-03-13 02:01:38 - 39.22	2023-03-13 02:35:38 - 39.28	2023-03-13 03:09:38 - 39.08
2023-03-13 02:02:38 - 39.33	2023-03-13 02:36:38 - 39.23	2023-03-13 03:10:38 - 39.04
2023-03-13 02:03:38 - 39.31	2023-03-13 02:37:38 - 39.29	2023-03-13 03:11:38 - 39.07
2023-03-13 02:04:38 - 39.27	2023-03-13 02:38:38 - 39.27	2023-03-13 03:12:38 - 39.12
2023-03-13 02:05:38 - 39.18	2023-03-13 02:39:38 - 39.33	2023-03-13 03:13:38 - 39.15
2023-03-13 02:06:38 - 39.3	2023-03-13 02:40:38 - 39.25	2023-03-13 03:14:38 - 39.11
2023-03-13 02:07:38 - 39.33	2023-03-13 02:41:38 - 39.39	2023-03-13 03:15:38 - 38.97
2023-03-13 02:08:38 - 39.29	2023-03-13 02:42:38 - 39.29	2023-03-13 03:16:38 - 39.14
2023-03-13 02:09:38 - 39.28	2023-03-13 02:43:38 - 39.29	2023-03-13 03:17:38 - 38.84
2023-03-13 02:10:38 - 39.32	2023-03-13 02:44:38 - 39.36	2023-03-13 03:18:38 - 39.04
2023-03-13 02:11:38 - 39.26	2023-03-13 02:45:38 - 39.31	2023-03-13 03:19:38 - 39.02
2023-03-13 02:12:38 - 39.24	2023-03-13 02:46:38 - 39.24	2023-03-13 03:20:38 - 38.94
2023-03-13 02:13:38 - 39.1	2023-03-13 02:47:38 - 39.26	2023-03-13 03:21:38 - 39.14
2023-03-13 02:14:38 - 39.19	2023-03-13 02:48:38 - 39.33	2023-03-13 03:22:38 - 39.03
2023-03-13 02:15:38 - 39.29	2023-03-13 02:49:38 - 39.28	2023-03-13 03:23:38 - 39.1

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 03:24:38 - 39.02	2023-03-13 03:58:38 - 39.03	2023-03-13 04:32:38 - 38.91
2023-03-13 03:25:38 - 38.99	2023-03-13 03:59:38 - 40.15	2023-03-13 04:33:38 - 38.91
2023-03-13 03:26:38 - 39.05	2023-03-13 04:00:38 - 38.95	2023-03-13 04:34:38 - 38.86
2023-03-13 03:27:38 - 39.0	2023-03-13 04:01:38 - 38.9	2023-03-13 04:35:38 - 38.82
2023-03-13 03:28:38 - 39.15	2023-03-13 04:02:38 - 38.92	2023-03-13 04:36:38 - 38.86
2023-03-13 03:29:38 - 39.06	2023-03-13 04:03:38 - 38.95	2023-03-13 04:37:38 - 38.9
2023-03-13 03:30:38 - 39.11	2023-03-13 04:04:38 - 39.01	2023-03-13 04:38:38 - 38.89
2023-03-13 03:31:38 - 39.15	2023-03-13 04:05:38 - 38.83	2023-03-13 04:39:38 - 38.85
2023-03-13 03:32:38 - 38.98	2023-03-13 04:06:38 - 38.89	2023-03-13 04:40:38 - 38.91
2023-03-13 03:33:38 - 38.9	2023-03-13 04:07:38 - 38.79	2023-03-13 04:41:38 - 38.85
2023-03-13 03:34:38 - 39.04	2023-03-13 04:08:38 - 38.91	2023-03-13 04:42:38 - 38.87
2023-03-13 03:35:38 - 39.03	2023-03-13 04:09:38 - 38.89	2023-03-13 04:43:38 - 38.93
2023-03-13 03:36:38 - 39.01	2023-03-13 04:10:38 - 38.88	2023-03-13 04:44:38 - 38.88
2023-03-13 03:37:38 - 39.05	2023-03-13 04:11:38 - 38.88	2023-03-13 04:45:38 - 38.9
2023-03-13 03:38:38 - 39.06	2023-03-13 04:12:38 - 38.92	2023-03-13 04:46:38 - 38.89
2023-03-13 03:39:38 - 39.11	2023-03-13 04:13:38 - 38.96	2023-03-13 04:47:38 - 38.91
2023-03-13 03:40:38 - 39.05	2023-03-13 04:14:38 - 38.97	2023-03-13 04:48:38 - 38.86
2023-03-13 03:41:38 - 39.06	2023-03-13 04:15:38 - 38.84	2023-03-13 04:49:38 - 38.82
2023-03-13 03:42:38 - 39.05	2023-03-13 04:16:38 - 38.95	2023-03-13 04:50:38 - 38.8
2023-03-13 03:43:38 - 39.05	2023-03-13 04:17:38 - 38.92	2023-03-13 04:51:38 - 38.85
2023-03-13 03:44:38 - 39.03	2023-03-13 04:18:38 - 38.84	2023-03-13 04:52:38 - 38.96
2023-03-13 03:45:38 - 39.08	2023-03-13 04:19:38 - 38.99	2023-03-13 04:53:38 - 38.86
2023-03-13 03:46:38 - 39.06	2023-03-13 04:20:38 - 38.84	2023-03-13 04:54:38 - 38.92
2023-03-13 03:47:38 - 38.88	2023-03-13 04:21:38 - 38.9	2023-03-13 04:55:38 - 38.88
2023-03-13 03:48:38 - 39.05	2023-03-13 04:22:38 - 38.92	2023-03-13 04:56:38 - 38.89
2023-03-13 03:49:38 - 39.03	2023-03-13 04:23:38 - 38.9	2023-03-13 04:57:38 - 38.88
2023-03-13 03:50:38 - 38.85	2023-03-13 04:24:38 - 38.93	2023-03-13 04:58:38 - 38.93
2023-03-13 03:51:38 - 39.12	2023-03-13 04:25:38 - 38.74	2023-03-13 04:59:38 - 39.43
2023-03-13 03:52:38 - 38.98	2023-03-13 04:26:38 - 38.89	2023-03-13 05:00:38 - 38.33
2023-03-13 03:53:38 - 39.08	2023-03-13 04:27:38 - 38.87	2023-03-13 05:01:38 - 38.25
2023-03-13 03:54:38 - 39.06	2023-03-13 04:28:38 - 38.96	2023-03-13 05:02:38 - 38.27
2023-03-13 03:55:38 - 39.05	2023-03-13 04:29:38 - 38.9	2023-03-13 05:03:38 - 38.3
2023-03-13 03:56:38 - 39.09	2023-03-13 04:30:38 - 38.9	2023-03-13 05:04:38 - 38.5
2023-03-13 03:57:38 - 39.06	2023-03-13 04:31:38 - 38.85	2023-03-13 05:05:38 - 38.34

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 05:06:38 - 38.24	2023-03-13 05:40:38 - 38.3	2023-03-13 06:14:38 - 38.3
2023-03-13 05:07:38 - 38.33	2023-03-13 05:41:38 - 38.34	2023-03-13 06:15:38 - 38.25
2023-03-13 05:08:38 - 38.29	2023-03-13 05:42:38 - 38.28	2023-03-13 06:16:38 - 38.3
2023-03-13 05:09:38 - 38.42	2023-03-13 05:43:38 - 38.37	2023-03-13 06:17:38 - 38.32
2023-03-13 05:10:38 - 38.33	2023-03-13 05:44:38 - 38.41	2023-03-13 06:18:38 - 38.27
2023-03-13 05:11:38 - 38.22	2023-03-13 05:45:38 - 38.32	2023-03-13 06:19:38 - 38.4
2023-03-13 05:12:38 - 38.35	2023-03-13 05:46:38 - 38.34	2023-03-13 06:20:38 - 38.3
2023-03-13 05:13:38 - 38.28	2023-03-13 05:47:38 - 38.31	2023-03-13 06:21:38 - 38.33
2023-03-13 05:14:38 - 38.32	2023-03-13 05:48:38 - 38.38	2023-03-13 06:22:38 - 38.29
2023-03-13 05:15:38 - 38.32	2023-03-13 05:49:38 - 38.39	2023-03-13 06:23:38 - 38.38
2023-03-13 05:16:38 - 38.27	2023-03-13 05:50:38 - 38.35	2023-03-13 06:24:38 - 38.3
2023-03-13 05:17:38 - 38.3	2023-03-13 05:51:38 - 38.31	2023-03-13 06:25:38 - 38.33
2023-03-13 05:18:38 - 38.31	2023-03-13 05:52:38 - 38.31	2023-03-13 06:26:38 - 38.36
2023-03-13 05:19:38 - 38.3	2023-03-13 05:53:38 - 38.2	2023-03-13 06:27:38 - 38.29
2023-03-13 05:20:38 - 38.37	2023-03-13 05:54:38 - 38.34	2023-03-13 06:28:38 - 38.33
2023-03-13 05:21:38 - 38.32	2023-03-13 05:55:38 - 38.31	2023-03-13 06:29:38 - 38.27
2023-03-13 05:22:38 - 38.43	2023-03-13 05:56:38 - 38.35	2023-03-13 06:30:38 - 38.34
2023-03-13 05:23:38 - 38.36	2023-03-13 05:57:38 - 38.4	2023-03-13 06:31:38 - 38.42
2023-03-13 05:24:38 - 38.32	2023-03-13 05:58:38 - 38.3	2023-03-13 06:32:38 - 38.25
2023-03-13 05:25:38 - 38.33	2023-03-13 05:59:38 - 37.67	2023-03-13 06:33:38 - 38.3
2023-03-13 05:26:38 - 38.32	2023-03-13 06:00:38 - 38.41	2023-03-13 06:34:38 - 38.32
2023-03-13 05:27:38 - 38.32	2023-03-13 06:01:38 - 38.22	2023-03-13 06:35:38 - 38.3
2023-03-13 05:28:38 - 38.32	2023-03-13 06:02:38 - 38.31	2023-03-13 06:36:38 - 38.33
2023-03-13 05:29:38 - 38.32	2023-03-13 06:03:38 - 38.27	2023-03-13 06:37:38 - 38.26
2023-03-13 05:30:38 - 38.35	2023-03-13 06:04:38 - 38.13	2023-03-13 06:38:38 - 38.23
2023-03-13 05:31:38 - 38.4	2023-03-13 06:05:38 - 38.31	2023-03-13 06:39:38 - 38.42
2023-03-13 05:32:38 - 38.43	2023-03-13 06:06:38 - 38.24	2023-03-13 06:40:38 - 38.36
2023-03-13 05:33:38 - 38.31	2023-03-13 06:07:38 - 38.37	2023-03-13 06:41:38 - 38.31
2023-03-13 05:34:38 - 38.39	2023-03-13 06:08:38 - 38.26	2023-03-13 06:42:38 - 38.29
2023-03-13 05:35:38 - 38.35	2023-03-13 06:09:38 - 38.22	2023-03-13 06:43:38 - 38.36
2023-03-13 05:36:38 - 38.37	2023-03-13 06:10:38 - 38.32	2023-03-13 06:44:38 - 38.5
2023-03-13 05:37:38 - 38.39	2023-03-13 06:11:38 - 38.34	2023-03-13 06:45:38 - 38.34
2023-03-13 05:38:38 - 38.24	2023-03-13 06:12:38 - 38.29	2023-03-13 06:46:38 - 38.31
2023-03-13 05:39:38 - 38.3	2023-03-13 06:13:38 - 38.29	2023-03-13 06:47:38 - 38.37

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 06:48:38 - 38.28	2023-03-13 07:22:38 - 33.8	2023-03-13 07:56:38 - 33.88
2023-03-13 06:49:38 - 38.28	2023-03-13 07:23:38 - 33.87	2023-03-13 07:57:38 - 33.78
2023-03-13 06:50:38 - 38.3	2023-03-13 07:24:38 - 33.92	2023-03-13 07:58:38 - 33.88
2023-03-13 06:51:38 - 38.33	2023-03-13 07:25:38 - 33.79	2023-03-13 07:59:38 - 33.68
2023-03-13 06:52:38 - 38.3	2023-03-13 07:26:38 - 33.77	2023-03-13 08:00:38 - 32.35
2023-03-13 06:53:38 - 38.25	2023-03-13 07:27:38 - 33.89	2023-03-13 08:01:38 - 32.5
2023-03-13 06:54:38 - 38.42	2023-03-13 07:28:38 - 33.93	2023-03-13 08:02:38 - 32.43
2023-03-13 06:55:38 - 38.24	2023-03-13 07:29:38 - 33.85	2023-03-13 08:03:38 - 32.42
2023-03-13 06:56:38 - 38.29	2023-03-13 07:30:38 - 33.81	2023-03-13 08:04:38 - 32.38
2023-03-13 06:57:38 - 38.32	2023-03-13 07:31:38 - 33.89	2023-03-13 08:05:38 - 32.44
2023-03-13 06:58:38 - 38.27	2023-03-13 07:32:38 - 33.85	2023-03-13 08:06:38 - 32.43
2023-03-13 06:59:38 - 37.73	2023-03-13 07:33:38 - 33.85	2023-03-13 08:07:38 - 32.48
2023-03-13 07:00:38 - 33.83	2023-03-13 07:34:38 - 33.87	2023-03-13 08:08:38 - 32.54
2023-03-13 07:01:38 - 33.81	2023-03-13 07:35:38 - 33.83	2023-03-13 08:09:38 - 32.38
2023-03-13 07:02:38 - 33.84	2023-03-13 07:36:38 - 33.86	2023-03-13 08:10:38 - 32.45
2023-03-13 07:03:38 - 33.86	2023-03-13 07:37:38 - 33.86	2023-03-13 08:11:38 - 32.47
2023-03-13 07:04:38 - 33.88	2023-03-13 07:38:38 - 33.92	2023-03-13 08:12:38 - 32.43
2023-03-13 07:05:38 - 33.75	2023-03-13 07:39:38 - 33.92	2023-03-13 08:13:38 - 32.54
2023-03-13 07:06:38 - 33.81	2023-03-13 07:40:38 - 33.87	2023-03-13 08:14:38 - 32.41
2023-03-13 07:07:38 - 33.84	2023-03-13 07:41:38 - 33.8	2023-03-13 08:15:38 - 32.44
2023-03-13 07:08:38 - 33.92	2023-03-13 07:42:38 - 33.96	2023-03-13 08:16:38 - 32.39
2023-03-13 07:09:38 - 33.87	2023-03-13 07:43:38 - 33.87	2023-03-13 08:17:38 - 32.53
2023-03-13 07:10:38 - 33.83	2023-03-13 07:44:38 - 33.86	2023-03-13 08:18:38 - 32.37
2023-03-13 07:11:38 - 33.9	2023-03-13 07:45:38 - 33.82	2023-03-13 08:19:38 - 32.46
2023-03-13 07:12:38 - 33.92	2023-03-13 07:46:38 - 33.82	2023-03-13 08:20:38 - 32.38
2023-03-13 07:13:38 - 33.86	2023-03-13 07:47:38 - 33.8	2023-03-13 08:21:38 - 32.74
2023-03-13 07:14:38 - 33.76	2023-03-13 07:48:38 - 33.94	2023-03-13 08:22:38 - 32.38
2023-03-13 07:15:38 - 33.86	2023-03-13 07:49:38 - 33.7	2023-03-13 08:23:38 - 32.52
2023-03-13 07:16:38 - 33.92	2023-03-13 07:50:38 - 33.86	2023-03-13 08:24:38 - 32.39
2023-03-13 07:17:38 - 33.83	2023-03-13 07:51:38 - 33.85	2023-03-13 08:25:38 - 32.35
2023-03-13 07:18:38 - 33.83	2023-03-13 07:52:38 - 33.83	2023-03-13 08:26:38 - 32.42
2023-03-13 07:19:38 - 33.88	2023-03-13 07:53:38 - 33.74	2023-03-13 08:27:38 - 32.4
2023-03-13 07:20:38 - 33.82	2023-03-13 07:54:38 - 33.92	2023-03-13 08:28:38 - 32.25
2023-03-13 07:21:38 - 33.93	2023-03-13 07:55:38 - 33.91	2023-03-13 08:29:38 - 32.3

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 08:30:38 - 32.53	2023-03-13 09:04:38 - 33.75	2023-03-13 09:38:38 - 33.76
2023-03-13 08:31:38 - 32.45	2023-03-13 09:05:38 - 33.74	2023-03-13 09:39:38 - 33.73
2023-03-13 08:32:38 - 32.46	2023-03-13 09:06:38 - 33.78	2023-03-13 09:40:38 - 33.82
2023-03-13 08:33:38 - 32.52	2023-03-13 09:07:38 - 33.74	2023-03-13 09:41:38 - 33.82
2023-03-13 08:34:38 - 32.36	2023-03-13 09:08:38 - 33.89	2023-03-13 09:42:38 - 33.81
2023-03-13 08:35:38 - 32.54	2023-03-13 09:09:38 - 33.85	2023-03-13 09:43:38 - 33.75
2023-03-13 08:36:38 - 32.42	2023-03-13 09:10:38 - 33.8	2023-03-13 09:44:38 - 33.67
2023-03-13 08:37:38 - 32.42	2023-03-13 09:11:38 - 33.85	2023-03-13 09:45:38 - 33.6
2023-03-13 08:38:38 - 32.37	2023-03-13 09:12:38 - 33.83	2023-03-13 09:46:38 - 33.93
2023-03-13 08:39:38 - 32.4	2023-03-13 09:13:38 - 33.83	2023-03-13 09:47:38 - 33.77
2023-03-13 08:40:38 - 32.59	2023-03-13 09:14:38 - 33.73	2023-03-13 09:48:38 - 33.69
2023-03-13 08:41:38 - 32.38	2023-03-13 09:15:38 - 33.86	2023-03-13 09:49:38 - 33.82
2023-03-13 08:42:38 - 32.38	2023-03-13 09:16:38 - 33.69	2023-03-13 09:50:38 - 33.72
2023-03-13 08:43:38 - 32.45	2023-03-13 09:17:38 - 33.7	2023-03-13 09:51:38 - 33.77
2023-03-13 08:44:38 - 32.43	2023-03-13 09:18:38 - 33.76	2023-03-13 09:52:38 - 33.73
2023-03-13 08:45:38 - 32.42	2023-03-13 09:19:38 - 33.68	2023-03-13 09:53:38 - 33.76
2023-03-13 08:46:38 - 32.42	2023-03-13 09:20:38 - 33.71	2023-03-13 09:54:38 - 33.74
2023-03-13 08:47:38 - 32.46	2023-03-13 09:21:38 - 33.67	2023-03-13 09:55:38 - 33.75
2023-03-13 08:48:38 - 32.55	2023-03-13 09:22:38 - 33.76	2023-03-13 09:56:38 - 33.7
2023-03-13 08:49:38 - 32.42	2023-03-13 09:23:38 - 33.68	2023-03-13 09:57:38 - 33.72
2023-03-13 08:50:38 - 32.42	2023-03-13 09:24:38 - 33.83	2023-03-13 09:58:38 - 33.77
2023-03-13 08:51:38 - 32.49	2023-03-13 09:25:38 - 33.73	2023-03-13 09:59:38 - 33.23
2023-03-13 08:52:38 - 32.35	2023-03-13 09:26:38 - 33.78	2023-03-13 10:00:38 - 32.16
2023-03-13 08:53:38 - 32.41	2023-03-13 09:27:38 - 33.75	2023-03-13 10:01:38 - 32.26
2023-03-13 08:54:38 - 32.41	2023-03-13 09:28:38 - 33.67	2023-03-13 10:02:38 - 32.17
2023-03-13 08:55:38 - 32.38	2023-03-13 09:29:38 - 33.68	2023-03-13 10:03:38 - 32.17
2023-03-13 08:56:38 - 32.46	2023-03-13 09:30:38 - 33.75	2023-03-13 10:04:38 - 32.21
2023-03-13 08:57:38 - 32.53	2023-03-13 09:31:38 - 33.78	2023-03-13 10:05:38 - 32.09
2023-03-13 08:58:38 - 32.48	2023-03-13 09:32:38 - 33.74	2023-03-13 10:06:38 - 32.15
2023-03-13 08:59:38 - 31.33	2023-03-13 09:33:38 - 33.83	2023-03-13 10:07:38 - 32.15
2023-03-13 09:00:38 - 33.74	2023-03-13 09:34:38 - 33.82	2023-03-13 10:08:38 - 32.12
2023-03-13 09:01:38 - 33.67	2023-03-13 09:35:38 - 33.77	2023-03-13 10:09:38 - 32.14
2023-03-13 09:02:38 - 33.77	2023-03-13 09:36:38 - 33.75	2023-03-13 10:10:38 - 32.17
2023-03-13 09:03:38 - 33.71	2023-03-13 09:37:38 - 33.83	2023-03-13 10:11:38 - 32.26

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 10:12:38 - 32.23	2023-03-13 10:46:38 - 32.18	2023-03-13 11:20:38 - 31.28
2023-03-13 10:13:38 - 32.19	2023-03-13 10:47:38 - 32.13	2023-03-13 11:21:38 - 31.37
2023-03-13 10:14:38 - 32.25	2023-03-13 10:48:38 - 32.14	2023-03-13 11:22:38 - 31.32
2023-03-13 10:15:38 - 32.08	2023-03-13 10:49:38 - 32.23	2023-03-13 11:23:38 - 31.36
2023-03-13 10:16:38 - 32.18	2023-03-13 10:50:38 - 32.21	2023-03-13 11:24:38 - 31.26
2023-03-13 10:17:38 - 32.26	2023-03-13 10:51:38 - 32.26	2023-03-13 11:25:38 - 31.25
2023-03-13 10:18:38 - 32.16	2023-03-13 10:52:38 - 32.19	2023-03-13 11:26:38 - 31.31
2023-03-13 10:19:38 - 32.08	2023-03-13 10:53:38 - 32.31	2023-03-13 11:27:38 - 31.31
2023-03-13 10:20:38 - 32.02	2023-03-13 10:54:38 - 32.15	2023-03-13 11:28:38 - 31.37
2023-03-13 10:21:38 - 32.19	2023-03-13 10:55:38 - 32.19	2023-03-13 11:29:38 - 31.37
2023-03-13 10:22:38 - 32.3	2023-03-13 10:56:38 - 32.09	2023-03-13 11:30:38 - 31.34
2023-03-13 10:23:38 - 32.15	2023-03-13 10:57:38 - 32.24	2023-03-13 11:31:38 - 31.3
2023-03-13 10:24:38 - 32.17	2023-03-13 10:58:38 - 32.25	2023-03-13 11:32:38 - 31.25
2023-03-13 10:25:38 - 32.17	2023-03-13 10:59:38 - 32.01	2023-03-13 11:33:38 - 31.51
2023-03-13 10:26:38 - 32.13	2023-03-13 11:00:38 - 31.38	2023-03-13 11:34:38 - 31.43
2023-03-13 10:27:38 - 32.16	2023-03-13 11:01:38 - 31.29	2023-03-13 11:35:38 - 31.27
2023-03-13 10:28:38 - 32.19	2023-03-13 11:02:38 - 31.22	2023-03-13 11:36:38 - 31.38
2023-03-13 10:29:38 - 32.24	2023-03-13 11:03:38 - 31.32	2023-03-13 11:37:38 - 31.35
2023-03-13 10:30:38 - 32.17	2023-03-13 11:04:38 - 31.34	2023-03-13 11:38:38 - 31.34
2023-03-13 10:31:38 - 32.15	2023-03-13 11:05:38 - 31.28	2023-03-13 11:39:38 - 31.3
2023-03-13 10:32:38 - 32.24	2023-03-13 11:06:38 - 31.18	2023-03-13 11:40:38 - 31.42
2023-03-13 10:33:38 - 32.12	2023-03-13 11:07:38 - 31.37	2023-03-13 11:41:38 - 31.28
2023-03-13 10:34:38 - 32.27	2023-03-13 11:08:38 - 31.34	2023-03-13 11:42:38 - 31.38
2023-03-13 10:35:38 - 32.16	2023-03-13 11:09:38 - 31.29	2023-03-13 11:43:38 - 31.29
2023-03-13 10:36:38 - 32.12	2023-03-13 11:10:38 - 31.3	2023-03-13 11:44:38 - 31.2
2023-03-13 10:37:38 - 32.15	2023-03-13 11:11:38 - 31.33	2023-03-13 11:45:38 - 31.45
2023-03-13 10:38:38 - 32.2	2023-03-13 11:12:38 - 31.26	2023-03-13 11:46:38 - 31.29
2023-03-13 10:39:38 - 32.18	2023-03-13 11:13:38 - 31.31	2023-03-13 11:47:38 - 31.3
2023-03-13 10:40:38 - 32.12	2023-03-13 11:14:38 - 31.2	2023-03-13 11:48:38 - 31.41
2023-03-13 10:41:38 - 32.12	2023-03-13 11:15:38 - 31.18	2023-03-13 11:49:38 - 31.31
2023-03-13 10:42:38 - 32.15	2023-03-13 11:16:38 - 31.24	2023-03-13 11:50:38 - 31.38
2023-03-13 10:43:38 - 32.13	2023-03-13 11:17:38 - 31.46	2023-03-13 11:51:38 - 31.31
2023-03-13 10:44:38 - 32.02	2023-03-13 11:18:38 - 31.32	2023-03-13 11:52:38 - 31.36
2023-03-13 10:45:38 - 32.13	2023-03-13 11:19:38 - 31.33	2023-03-13 11:53:38 - 31.32

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 11:54:38 - 31.37	2023-03-13 12:28:38 - 32.72	2023-03-13 13:02:38 - 31.93
2023-03-13 11:55:38 - 31.24	2023-03-13 12:29:38 - 32.78	2023-03-13 13:03:38 - 31.77
2023-03-13 11:56:38 - 31.27	2023-03-13 12:30:38 - 32.77	2023-03-13 13:04:38 - 31.82
2023-03-13 11:57:38 - 31.39	2023-03-13 12:31:38 - 32.71	2023-03-13 13:05:38 - 31.84
2023-03-13 11:58:38 - 31.29	2023-03-13 12:32:38 - 32.77	2023-03-13 13:06:38 - 31.71
2023-03-13 11:59:38 - 30.74	2023-03-13 12:33:38 - 32.75	2023-03-13 13:07:38 - 31.89
2023-03-13 12:00:38 - 32.71	2023-03-13 12:34:38 - 32.89	2023-03-13 13:08:38 - 31.8
2023-03-13 12:01:38 - 32.91	2023-03-13 12:35:38 - 32.8	2023-03-13 13:09:38 - 31.77
2023-03-13 12:02:38 - 32.81	2023-03-13 12:36:38 - 32.78	2023-03-13 13:10:38 - 31.81
2023-03-13 12:03:38 - 32.65	2023-03-13 12:37:38 - 32.76	2023-03-13 13:11:38 - 31.94
2023-03-13 12:04:38 - 32.86	2023-03-13 12:38:38 - 32.68	2023-03-13 13:12:38 - 31.81
2023-03-13 12:05:38 - 32.72	2023-03-13 12:39:38 - 32.77	2023-03-13 13:13:38 - 31.82
2023-03-13 12:06:38 - 32.78	2023-03-13 12:40:38 - 32.79	2023-03-13 13:14:38 - 31.8
2023-03-13 12:07:38 - 32.77	2023-03-13 12:41:38 - 32.85	2023-03-13 13:15:38 - 31.82
2023-03-13 12:08:38 - 32.77	2023-03-13 12:42:38 - 32.77	2023-03-13 13:16:38 - 31.74
2023-03-13 12:09:38 - 32.8	2023-03-13 12:43:38 - 32.8	2023-03-13 13:17:38 - 31.8
2023-03-13 12:10:38 - 32.73	2023-03-13 12:44:38 - 32.75	2023-03-13 13:18:38 - 31.79
2023-03-13 12:11:38 - 32.67	2023-03-13 12:45:38 - 32.63	2023-03-13 13:19:38 - 31.87
2023-03-13 12:12:38 - 32.75	2023-03-13 12:46:38 - 32.76	2023-03-13 13:20:38 - 31.79
2023-03-13 12:13:38 - 32.82	2023-03-13 12:47:38 - 32.72	2023-03-13 13:21:38 - 31.83
2023-03-13 12:14:38 - 32.81	2023-03-13 12:48:38 - 32.76	2023-03-13 13:22:38 - 31.79
2023-03-13 12:15:38 - 32.61	2023-03-13 12:49:38 - 32.73	2023-03-13 13:23:38 - 31.82
2023-03-13 12:16:38 - 32.83	2023-03-13 12:50:38 - 32.69	2023-03-13 13:24:38 - 31.87
2023-03-13 12:17:38 - 32.79	2023-03-13 12:51:38 - 32.72	2023-03-13 13:25:38 - 31.82
2023-03-13 12:18:38 - 32.82	2023-03-13 12:52:38 - 32.77	2023-03-13 13:26:38 - 31.81
2023-03-13 12:19:38 - 32.73	2023-03-13 12:53:38 - 32.79	2023-03-13 13:27:38 - 31.8
2023-03-13 12:20:38 - 32.8	2023-03-13 12:54:38 - 32.83	2023-03-13 13:28:38 - 31.8
2023-03-13 12:21:38 - 32.75	2023-03-13 12:55:38 - 32.76	2023-03-13 13:29:38 - 31.79
2023-03-13 12:22:38 - 32.77	2023-03-13 12:56:38 - 32.76	2023-03-13 13:30:38 - 31.88
2023-03-13 12:23:38 - 32.75	2023-03-13 12:57:38 - 32.74	2023-03-13 13:31:38 - 31.75
2023-03-13 12:24:38 - 32.82	2023-03-13 12:58:38 - 32.79	2023-03-13 13:32:38 - 31.81
2023-03-13 12:25:38 - 32.74	2023-03-13 12:59:38 - 33.18	2023-03-13 13:33:38 - 31.74
2023-03-13 12:26:38 - 32.82	2023-03-13 13:00:38 - 31.88	2023-03-13 13:34:38 - 31.83
2023-03-13 12:27:38 - 32.61	2023-03-13 13:01:38 - 31.7	2023-03-13 13:35:38 - 31.82

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 13:36:38 - 31.8	2023-03-13 14:10:38 - 31.33	2023-03-13 14:44:38 - 31.26
2023-03-13 13:37:38 - 31.88	2023-03-13 14:11:38 - 31.33	2023-03-13 14:45:38 - 31.38
2023-03-13 13:38:38 - 31.81	2023-03-13 14:12:38 - 31.34	2023-03-13 14:46:38 - 31.42
2023-03-13 13:39:38 - 31.81	2023-03-13 14:13:38 - 31.36	2023-03-13 14:47:38 - 31.35
2023-03-13 13:40:38 - 31.76	2023-03-13 14:14:38 - 31.34	2023-03-13 14:48:38 - 31.39
2023-03-13 13:41:38 - 31.81	2023-03-13 14:15:38 - 31.4	2023-03-13 14:49:38 - 31.38
2023-03-13 13:42:38 - 31.85	2023-03-13 14:16:38 - 31.34	2023-03-13 14:50:38 - 31.39
2023-03-13 13:43:38 - 31.8	2023-03-13 14:17:38 - 31.41	2023-03-13 14:51:38 - 31.3
2023-03-13 13:44:38 - 31.83	2023-03-13 14:18:38 - 31.28	2023-03-13 14:52:38 - 31.48
2023-03-13 13:45:38 - 31.82	2023-03-13 14:19:38 - 31.28	2023-03-13 14:53:38 - 31.45
2023-03-13 13:46:38 - 31.88	2023-03-13 14:20:38 - 31.36	2023-03-13 14:54:38 - 31.21
2023-03-13 13:47:38 - 31.9	2023-03-13 14:21:38 - 31.36	2023-03-13 14:55:38 - 31.29
2023-03-13 13:48:38 - 31.8	2023-03-13 14:22:38 - 31.44	2023-03-13 14:56:38 - 31.35
2023-03-13 13:49:38 - 31.84	2023-03-13 14:23:38 - 31.34	2023-03-13 14:57:38 - 31.35
2023-03-13 13:50:38 - 31.77	2023-03-13 14:24:38 - 31.32	2023-03-13 14:58:38 - 31.17
2023-03-13 13:51:38 - 31.76	2023-03-13 14:25:38 - 31.34	2023-03-13 14:59:38 - 30.73
2023-03-13 13:52:38 - 31.81	2023-03-13 14:26:38 - 31.44	2023-03-13 15:00:38 - 27.69
2023-03-13 13:53:38 - 31.84	2023-03-13 14:27:38 - 31.37	2023-03-13 15:01:38 - 27.63
2023-03-13 13:54:38 - 31.78	2023-03-13 14:28:38 - 31.43	2023-03-13 15:02:38 - 27.54
2023-03-13 13:55:38 - 31.89	2023-03-13 14:29:38 - 31.26	2023-03-13 15:03:38 - 27.45
2023-03-13 13:56:38 - 31.79	2023-03-13 14:30:38 - 31.38	2023-03-13 15:04:38 - 27.52
2023-03-13 13:57:38 - 31.9	2023-03-13 14:31:38 - 31.32	2023-03-13 15:05:38 - 27.51
2023-03-13 13:58:38 - 31.86	2023-03-13 14:32:38 - 31.28	2023-03-13 15:06:38 - 27.53
2023-03-13 13:59:38 - 31.36	2023-03-13 14:33:38 - 31.33	2023-03-13 15:07:38 - 27.55
2023-03-13 14:00:38 - 31.29	2023-03-13 14:34:38 - 31.47	2023-03-13 15:08:38 - 27.54
2023-03-13 14:01:38 - 31.31	2023-03-13 14:35:38 - 31.39	2023-03-13 15:09:38 - 27.52
2023-03-13 14:02:38 - 31.28	2023-03-13 14:36:38 - 31.35	2023-03-13 15:10:38 - 27.55
2023-03-13 14:03:38 - 31.36	2023-03-13 14:37:38 - 31.35	2023-03-13 15:11:38 - 27.4
2023-03-13 14:04:38 - 31.37	2023-03-13 14:38:38 - 31.29	2023-03-13 15:12:38 - 27.65
2023-03-13 14:05:38 - 31.32	2023-03-13 14:39:38 - 31.42	2023-03-13 15:13:38 - 27.57
2023-03-13 14:06:38 - 31.47	2023-03-13 14:40:38 - 31.35	2023-03-13 15:14:38 - 27.55
2023-03-13 14:07:38 - 31.33	2023-03-13 14:41:38 - 31.28	2023-03-13 15:15:38 - 27.62
2023-03-13 14:08:38 - 31.36	2023-03-13 14:42:38 - 31.33	2023-03-13 15:16:38 - 27.55
2023-03-13 14:09:38 - 31.38	2023-03-13 14:43:38 - 31.43	2023-03-13 15:17:38 - 27.47

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 15:18:38 - 27.64	2023-03-13 15:52:38 - 27.56	2023-03-13 16:26:38 - 34.33
2023-03-13 15:19:38 - 27.66	2023-03-13 15:53:38 - 27.53	2023-03-13 16:27:38 - 34.34
2023-03-13 15:20:38 - 27.5	2023-03-13 15:54:38 - 27.55	2023-03-13 16:28:38 - 34.32
2023-03-13 15:21:38 - 27.63	2023-03-13 15:55:38 - 27.38	2023-03-13 16:29:38 - 34.19
2023-03-13 15:22:38 - 27.7	2023-03-13 15:56:38 - 27.51	2023-03-13 16:30:38 - 34.24
2023-03-13 15:23:38 - 27.42	2023-03-13 15:57:38 - 27.58	2023-03-13 16:31:38 - 34.33
2023-03-13 15:24:38 - 27.44	2023-03-13 15:58:38 - 27.54	2023-03-13 16:32:38 - 34.35
2023-03-13 15:25:38 - 27.52	2023-03-13 15:59:38 - 27.21	2023-03-13 16:33:38 - 34.3
2023-03-13 15:26:38 - 27.51	2023-03-13 16:00:38 - 34.31	2023-03-13 16:34:38 - 34.43
2023-03-13 15:27:38 - 27.52	2023-03-13 16:01:38 - 34.42	2023-03-13 16:35:38 - 34.35
2023-03-13 15:28:38 - 27.53	2023-03-13 16:02:38 - 34.37	2023-03-13 16:36:38 - 34.17
2023-03-13 15:29:38 - 27.47	2023-03-13 16:03:38 - 34.38	2023-03-13 16:37:38 - 34.43
2023-03-13 15:30:38 - 27.56	2023-03-13 16:04:38 - 34.3	2023-03-13 16:38:38 - 34.32
2023-03-13 15:31:38 - 27.57	2023-03-13 16:05:38 - 34.33	2023-03-13 16:39:38 - 34.36
2023-03-13 15:32:38 - 27.59	2023-03-13 16:06:38 - 34.34	2023-03-13 16:40:38 - 34.28
2023-03-13 15:33:38 - 27.5	2023-03-13 16:07:38 - 34.34	2023-03-13 16:41:38 - 34.32
2023-03-13 15:34:38 - 27.61	2023-03-13 16:08:38 - 34.41	2023-03-13 16:42:38 - 34.32
2023-03-13 15:35:38 - 27.55	2023-03-13 16:09:38 - 34.33	2023-03-13 16:43:38 - 34.26
2023-03-13 15:36:38 - 27.32	2023-03-13 16:10:38 - 34.39	2023-03-13 16:44:38 - 34.28
2023-03-13 15:37:38 - 27.56	2023-03-13 16:11:38 - 34.34	2023-03-13 16:45:38 - 34.3
2023-03-13 15:38:38 - 27.45	2023-03-13 16:12:38 - 34.35	2023-03-13 16:46:38 - 34.19
2023-03-13 15:39:38 - 27.43	2023-03-13 16:13:38 - 34.36	2023-03-13 16:47:38 - 34.35
2023-03-13 15:40:38 - 27.53	2023-03-13 16:14:38 - 34.41	2023-03-13 16:48:38 - 34.34
2023-03-13 15:41:38 - 27.54	2023-03-13 16:15:38 - 34.35	2023-03-13 16:49:38 - 34.32
2023-03-13 15:42:38 - 27.57	2023-03-13 16:16:38 - 34.42	2023-03-13 16:50:38 - 34.32
2023-03-13 15:43:38 - 27.53	2023-03-13 16:17:38 - 34.35	2023-03-13 16:51:38 - 34.21
2023-03-13 15:44:38 - 27.45	2023-03-13 16:18:38 - 34.32	2023-03-13 16:52:38 - 34.35
2023-03-13 15:45:38 - 27.6	2023-03-13 16:19:38 - 34.22	2023-03-13 16:53:38 - 34.34
2023-03-13 15:46:38 - 27.56	2023-03-13 16:20:38 - 34.24	2023-03-13 16:54:38 - 34.33
2023-03-13 15:47:38 - 27.56	2023-03-13 16:21:38 - 34.32	2023-03-13 16:55:38 - 34.33
2023-03-13 15:48:38 - 27.54	2023-03-13 16:22:38 - 34.22	2023-03-13 16:56:38 - 34.35
2023-03-13 15:49:38 - 27.55	2023-03-13 16:23:38 - 34.26	2023-03-13 16:57:38 - 34.36
2023-03-13 15:50:38 - 27.48	2023-03-13 16:24:38 - 34.36	2023-03-13 16:58:38 - 34.4
2023-03-13 15:51:38 - 27.53	2023-03-13 16:25:38 - 34.35	2023-03-13 16:59:38 - 35.2

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 17:00:38 - 39.05	2023-03-13 17:34:38 - 39.0	2023-03-13 18:08:38 - 38.43
2023-03-13 17:01:38 - 39.04	2023-03-13 17:35:38 - 38.97	2023-03-13 18:09:38 - 38.33
2023-03-13 17:02:38 - 39.11	2023-03-13 17:36:38 - 39.01	2023-03-13 18:10:38 - 38.36
2023-03-13 17:03:38 - 39.08	2023-03-13 17:37:38 - 39.06	2023-03-13 18:11:38 - 38.36
2023-03-13 17:04:38 - 39.07	2023-03-13 17:38:38 - 39.16	2023-03-13 18:12:38 - 38.46
2023-03-13 17:05:38 - 39.0	2023-03-13 17:39:38 - 39.06	2023-03-13 18:13:38 - 38.31
2023-03-13 17:06:38 - 38.96	2023-03-13 17:40:38 - 39.11	2023-03-13 18:14:38 - 38.4
2023-03-13 17:07:38 - 39.06	2023-03-13 17:41:38 - 39.1	2023-03-13 18:15:38 - 38.33
2023-03-13 17:08:38 - 39.04	2023-03-13 17:42:38 - 39.08	2023-03-13 18:16:38 - 38.48
2023-03-13 17:09:38 - 39.03	2023-03-13 17:43:38 - 39.04	2023-03-13 18:17:38 - 38.38
2023-03-13 17:10:38 - 39.09	2023-03-13 17:44:38 - 39.08	2023-03-13 18:18:38 - 38.39
2023-03-13 17:11:38 - 39.12	2023-03-13 17:45:38 - 39.07	2023-03-13 18:19:38 - 38.19
2023-03-13 17:12:38 - 39.05	2023-03-13 17:46:38 - 39.05	2023-03-13 18:20:38 - 38.43
2023-03-13 17:13:38 - 39.12	2023-03-13 17:47:38 - 39.05	2023-03-13 18:21:38 - 38.42
2023-03-13 17:14:38 - 39.04	2023-03-13 17:48:38 - 39.04	2023-03-13 18:22:38 - 38.39
2023-03-13 17:15:38 - 39.1	2023-03-13 17:49:38 - 39.0	2023-03-13 18:23:38 - 38.45
2023-03-13 17:16:38 - 39.08	2023-03-13 17:50:38 - 39.07	2023-03-13 18:24:38 - 38.42
2023-03-13 17:17:38 - 39.0	2023-03-13 17:51:38 - 39.1	2023-03-13 18:25:38 - 38.38
2023-03-13 17:18:38 - 39.07	2023-03-13 17:52:38 - 38.97	2023-03-13 18:26:38 - 38.38
2023-03-13 17:19:38 - 39.01	2023-03-13 17:53:38 - 39.11	2023-03-13 18:27:38 - 38.44
2023-03-13 17:20:38 - 38.98	2023-03-13 17:54:38 - 39.04	2023-03-13 18:28:38 - 38.33
2023-03-13 17:21:38 - 39.08	2023-03-13 17:55:38 - 39.04	2023-03-13 18:29:38 - 38.31
2023-03-13 17:22:38 - 38.97	2023-03-13 17:56:38 - 39.01	2023-03-13 18:30:38 - 38.33
2023-03-13 17:23:38 - 39.07	2023-03-13 17:57:38 - 39.04	2023-03-13 18:31:38 - 38.26
2023-03-13 17:24:38 - 39.03	2023-03-13 17:58:38 - 39.1	2023-03-13 18:32:38 - 38.47
2023-03-13 17:25:38 - 39.08	2023-03-13 17:59:38 - 39.71	2023-03-13 18:33:38 - 38.28
2023-03-13 17:26:38 - 39.1	2023-03-13 18:00:38 - 38.39	2023-03-13 18:34:38 - 38.38
2023-03-13 17:27:38 - 38.92	2023-03-13 18:01:38 - 38.37	2023-03-13 18:35:38 - 38.31
2023-03-13 17:28:38 - 39.0	2023-03-13 18:02:38 - 38.4	2023-03-13 18:36:38 - 38.4
2023-03-13 17:29:38 - 39.06	2023-03-13 18:03:38 - 38.37	2023-03-13 18:37:38 - 38.39
2023-03-13 17:30:38 - 39.07	2023-03-13 18:04:38 - 38.39	2023-03-13 18:38:38 - 38.36
2023-03-13 17:31:38 - 39.08	2023-03-13 18:05:38 - 38.44	2023-03-13 18:39:38 - 38.37
2023-03-13 17:32:38 - 38.98	2023-03-13 18:06:38 - 38.39	2023-03-13 18:40:38 - 38.26
2023-03-13 17:33:38 - 39.03	2023-03-13 18:07:38 - 38.32	2023-03-13 18:41:38 - 38.35

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 18:42:38 - 38.33	2023-03-13 19:16:38 - 39.26	2023-03-13 19:50:38 - 39.41
2023-03-13 18:43:38 - 38.39	2023-03-13 19:17:38 - 39.36	2023-03-13 19:51:38 - 39.32
2023-03-13 18:44:38 - 38.35	2023-03-13 19:18:38 - 39.37	2023-03-13 19:52:38 - 39.36
2023-03-13 18:45:38 - 38.28	2023-03-13 19:19:38 - 39.36	2023-03-13 19:53:38 - 39.4
2023-03-13 18:46:38 - 38.37	2023-03-13 19:20:38 - 39.38	2023-03-13 19:54:38 - 39.39
2023-03-13 18:47:38 - 38.4	2023-03-13 19:21:38 - 39.34	2023-03-13 19:55:38 - 39.4
2023-03-13 18:48:38 - 38.39	2023-03-13 19:22:38 - 39.33	2023-03-13 19:56:38 - 39.37
2023-03-13 18:49:38 - 38.43	2023-03-13 19:23:38 - 39.39	2023-03-13 19:57:38 - 39.32
2023-03-13 18:50:38 - 38.42	2023-03-13 19:24:38 - 39.48	2023-03-13 19:58:38 - 39.3
2023-03-13 18:51:38 - 38.37	2023-03-13 19:25:38 - 39.35	2023-03-13 19:59:38 - 39.76
2023-03-13 18:52:38 - 38.35	2023-03-13 19:26:38 - 39.37	2023-03-13 20:00:38 - 38.84
2023-03-13 18:53:38 - 38.48	2023-03-13 19:27:38 - 39.39	2023-03-13 20:01:38 - 38.79
2023-03-13 18:54:38 - 38.35	2023-03-13 19:28:38 - 39.33	2023-03-13 20:02:38 - 38.82
2023-03-13 18:55:38 - 38.39	2023-03-13 19:29:38 - 39.39	2023-03-13 20:03:38 - 38.72
2023-03-13 18:56:38 - 38.57	2023-03-13 19:30:38 - 39.37	2023-03-13 20:04:38 - 38.83
2023-03-13 18:57:38 - 38.33	2023-03-13 19:31:38 - 39.31	2023-03-13 20:05:38 - 38.84
2023-03-13 18:58:38 - 38.41	2023-03-13 19:32:38 - 39.25	2023-03-13 20:06:38 - 38.78
2023-03-13 18:59:38 - 38.6	2023-03-13 19:33:38 - 39.31	2023-03-13 20:07:38 - 38.84
2023-03-13 19:00:38 - 39.31	2023-03-13 19:34:38 - 39.39	2023-03-13 20:08:38 - 38.68
2023-03-13 19:01:38 - 39.39	2023-03-13 19:35:38 - 39.37	2023-03-13 20:09:38 - 38.88
2023-03-13 19:02:38 - 39.44	2023-03-13 19:36:38 - 39.36	2023-03-13 20:10:38 - 38.83
2023-03-13 19:03:38 - 39.37	2023-03-13 19:37:38 - 39.38	2023-03-13 20:11:38 - 38.82
2023-03-13 19:04:38 - 39.37	2023-03-13 19:38:38 - 39.2	2023-03-13 20:12:38 - 38.77
2023-03-13 19:05:38 - 39.24	2023-03-13 19:39:38 - 39.32	2023-03-13 20:13:38 - 38.82
2023-03-13 19:06:38 - 39.35	2023-03-13 19:40:38 - 39.22	2023-03-13 20:14:38 - 38.82
2023-03-13 19:07:38 - 39.34	2023-03-13 19:41:38 - 39.35	2023-03-13 20:15:38 - 38.85
2023-03-13 19:08:38 - 39.33	2023-03-13 19:42:38 - 39.44	2023-03-13 20:16:38 - 38.77
2023-03-13 19:09:38 - 39.31	2023-03-13 19:43:38 - 39.38	2023-03-13 20:17:38 - 38.86
2023-03-13 19:10:38 - 39.32	2023-03-13 19:44:38 - 39.37	2023-03-13 20:18:38 - 38.85
2023-03-13 19:11:38 - 39.36	2023-03-13 19:45:38 - 39.38	2023-03-13 20:19:38 - 38.86
2023-03-13 19:12:38 - 39.43	2023-03-13 19:46:38 - 39.43	2023-03-13 20:20:38 - 38.81
2023-03-13 19:13:38 - 39.3	2023-03-13 19:47:38 - 39.34	2023-03-13 20:21:38 - 38.74
2023-03-13 19:14:38 - 39.48	2023-03-13 19:48:38 - 39.33	2023-03-13 20:22:38 - 38.92
2023-03-13 19:15:38 - 39.28	2023-03-13 19:49:38 - 39.35	2023-03-13 20:23:38 - 39.01

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 20:24:38 - 38.76	2023-03-13 20:58:38 - 38.97	2023-03-13 21:32:38 - 39.21
2023-03-13 20:25:38 - 38.81	2023-03-13 20:59:38 - 39.89	2023-03-13 21:33:38 - 39.27
2023-03-13 20:26:38 - 38.87	2023-03-13 21:00:38 - 39.22	2023-03-13 21:34:38 - 39.23
2023-03-13 20:27:38 - 38.92	2023-03-13 21:01:38 - 39.24	2023-03-13 21:35:38 - 39.21
2023-03-13 20:28:38 - 38.82	2023-03-13 21:02:38 - 39.22	2023-03-13 21:36:38 - 39.24
2023-03-13 20:29:38 - 38.94	2023-03-13 21:03:38 - 39.27	2023-03-13 21:37:38 - 39.24
2023-03-13 20:30:38 - 38.8	2023-03-13 21:04:38 - 39.19	2023-03-13 21:38:38 - 39.21
2023-03-13 20:31:38 - 38.89	2023-03-13 21:05:38 - 39.24	2023-03-13 21:39:38 - 39.22
2023-03-13 20:32:38 - 38.86	2023-03-13 21:06:38 - 39.22	2023-03-13 21:40:38 - 39.22
2023-03-13 20:33:38 - 38.81	2023-03-13 21:07:38 - 39.23	2023-03-13 21:41:38 - 39.16
2023-03-13 20:34:38 - 38.94	2023-03-13 21:08:38 - 39.2	2023-03-13 21:42:38 - 39.19
2023-03-13 20:35:38 - 38.86	2023-03-13 21:09:38 - 39.22	2023-03-13 21:43:38 - 39.19
2023-03-13 20:36:38 - 38.83	2023-03-13 21:10:38 - 39.25	2023-03-13 21:44:38 - 39.15
2023-03-13 20:37:38 - 38.86	2023-03-13 21:11:38 - 39.22	2023-03-13 21:45:38 - 39.23
2023-03-13 20:38:38 - 38.88	2023-03-13 21:12:38 - 39.26	2023-03-13 21:46:38 - 39.27
2023-03-13 20:39:38 - 38.59	2023-03-13 21:13:38 - 39.25	2023-03-13 21:47:38 - 39.1
2023-03-13 20:40:38 - 38.92	2023-03-13 21:14:38 - 39.22	2023-03-13 21:48:38 - 39.28
2023-03-13 20:41:38 - 38.82	2023-03-13 21:15:38 - 39.17	2023-03-13 21:49:38 - 39.2
2023-03-13 20:42:38 - 38.84	2023-03-13 21:16:38 - 39.32	2023-03-13 21:50:38 - 39.17
2023-03-13 20:43:38 - 38.7	2023-03-13 21:17:38 - 39.22	2023-03-13 21:51:38 - 39.23
2023-03-13 20:44:38 - 38.94	2023-03-13 21:18:38 - 39.17	2023-03-13 21:52:38 - 39.27
2023-03-13 20:45:38 - 38.87	2023-03-13 21:19:38 - 39.14	2023-03-13 21:53:38 - 39.37
2023-03-13 20:46:38 - 38.81	2023-03-13 21:20:38 - 39.27	2023-03-13 21:54:38 - 39.2
2023-03-13 20:47:38 - 38.81	2023-03-13 21:21:38 - 39.22	2023-03-13 21:55:38 - 39.15
2023-03-13 20:48:38 - 38.82	2023-03-13 21:22:38 - 39.22	2023-03-13 21:56:38 - 39.3
2023-03-13 20:49:38 - 38.72	2023-03-13 21:23:38 - 39.29	2023-03-13 21:57:38 - 39.22
2023-03-13 20:50:38 - 38.84	2023-03-13 21:24:38 - 39.24	2023-03-13 21:58:38 - 39.22
2023-03-13 20:51:38 - 38.76	2023-03-13 21:25:38 - 39.37	2023-03-13 21:59:38 - 39.43
2023-03-13 20:52:38 - 38.88	2023-03-13 21:26:38 - 39.24	2023-03-13 22:00:38 - 38.45
2023-03-13 20:53:38 - 38.79	2023-03-13 21:27:38 - 39.18	2023-03-13 22:01:38 - 38.41
2023-03-13 20:54:38 - 38.91	2023-03-13 21:28:38 - 39.21	2023-03-13 22:02:38 - 38.49
2023-03-13 20:55:38 - 38.83	2023-03-13 21:29:38 - 39.29	2023-03-13 22:03:38 - 38.64
2023-03-13 20:56:38 - 38.84	2023-03-13 21:30:38 - 39.22	2023-03-13 22:04:38 - 38.48
2023-03-13 20:57:38 - 38.84	2023-03-13 21:31:38 - 39.22	2023-03-13 22:05:38 - 38.52

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 22:06:38 - 38.51	2023-03-13 22:40:38 - 38.52	2023-03-13 23:14:38 - 39.15
2023-03-13 22:07:38 - 38.54	2023-03-13 22:41:38 - 38.5	2023-03-13 23:15:38 - 39.13
2023-03-13 22:08:38 - 38.56	2023-03-13 22:42:38 - 38.49	2023-03-13 23:16:38 - 39.07
2023-03-13 22:09:38 - 38.49	2023-03-13 22:43:38 - 38.51	2023-03-13 23:17:38 - 39.2
2023-03-13 22:10:38 - 38.63	2023-03-13 22:44:38 - 38.57	2023-03-13 23:18:38 - 39.18
2023-03-13 22:11:38 - 38.53	2023-03-13 22:45:38 - 38.39	2023-03-13 23:19:38 - 39.28
2023-03-13 22:12:38 - 38.61	2023-03-13 22:46:38 - 38.52	2023-03-13 23:20:38 - 39.18
2023-03-13 22:13:38 - 38.5	2023-03-13 22:47:38 - 38.54	2023-03-13 23:21:38 - 39.16
2023-03-13 22:14:38 - 38.57	2023-03-13 22:48:38 - 38.44	2023-03-13 23:22:38 - 39.07
2023-03-13 22:15:38 - 38.48	2023-03-13 22:49:38 - 38.49	2023-03-13 23:23:38 - 39.22
2023-03-13 22:16:38 - 38.55	2023-03-13 22:50:38 - 38.62	2023-03-13 23:24:38 - 39.17
2023-03-13 22:17:38 - 38.47	2023-03-13 22:51:38 - 38.48	2023-03-13 23:25:38 - 39.06
2023-03-13 22:18:38 - 38.56	2023-03-13 22:52:38 - 38.57	2023-03-13 23:26:38 - 39.1
2023-03-13 22:19:38 - 38.38	2023-03-13 22:53:38 - 38.5	2023-03-13 23:27:38 - 39.19
2023-03-13 22:20:38 - 38.48	2023-03-13 22:54:38 - 38.53	2023-03-13 23:28:38 - 39.14
2023-03-13 22:21:38 - 38.5	2023-03-13 22:55:38 - 38.59	2023-03-13 23:29:38 - 39.02
2023-03-13 22:22:38 - 38.59	2023-03-13 22:56:38 - 38.53	2023-03-13 23:30:38 - 39.09
2023-03-13 22:23:38 - 38.49	2023-03-13 22:57:38 - 38.51	2023-03-13 23:31:38 - 39.15
2023-03-13 22:24:38 - 38.51	2023-03-13 22:58:38 - 38.52	2023-03-13 23:32:38 - 39.1
2023-03-13 22:25:38 - 38.56	2023-03-13 22:59:38 - 38.43	2023-03-13 23:33:38 - 39.14
2023-03-13 22:26:38 - 38.47	2023-03-13 23:00:38 - 39.2	2023-03-13 23:34:38 - 39.17
2023-03-13 22:27:38 - 38.58	2023-03-13 23:01:38 - 39.05	2023-03-13 23:35:38 - 39.13
2023-03-13 22:28:38 - 38.47	2023-03-13 23:02:38 - 39.19	2023-03-13 23:36:38 - 39.14
2023-03-13 22:29:38 - 38.54	2023-03-13 23:03:38 - 39.21	2023-03-13 23:37:38 - 39.14
2023-03-13 22:30:38 - 38.65	2023-03-13 23:04:38 - 39.24	2023-03-13 23:38:38 - 39.1
2023-03-13 22:31:38 - 38.38	2023-03-13 23:05:38 - 39.22	2023-03-13 23:39:38 - 39.14
2023-03-13 22:32:38 - 38.49	2023-03-13 23:06:38 - 39.08	2023-03-13 23:40:38 - 39.17
2023-03-13 22:33:38 - 38.58	2023-03-13 23:07:38 - 39.15	2023-03-13 23:41:38 - 39.11
2023-03-13 22:34:38 - 38.56	2023-03-13 23:08:38 - 39.1	2023-03-13 23:42:38 - 39.11
2023-03-13 22:35:38 - 38.6	2023-03-13 23:09:38 - 39.15	2023-03-13 23:43:38 - 39.13
2023-03-13 22:36:38 - 38.5	2023-03-13 23:10:38 - 39.14	2023-03-13 23:44:38 - 39.04
2023-03-13 22:37:38 - 38.56	2023-03-13 23:11:38 - 39.21	2023-03-13 23:45:38 - 39.14
2023-03-13 22:38:38 - 38.47	2023-03-13 23:12:38 - 39.14	2023-03-13 23:46:38 - 39.16
2023-03-13 22:39:38 - 38.58	2023-03-13 23:13:38 - 39.15	2023-03-13 23:47:38 - 39.17

Horário/Leitura

2023-03-13 23:48:38 - 39.02
2023-03-13 23:49:38 - 39.19
2023-03-13 23:50:38 - 39.16
2023-03-13 23:51:38 - 39.15
2023-03-13 23:52:38 - 39.12
2023-03-13 23:53:38 - 39.09
2023-03-13 23:54:38 - 39.17
2023-03-13 23:55:38 - 39.21
2023-03-13 23:56:38 - 39.1
2023-03-13 23:57:38 - 39.15
2023-03-13 23:58:38 - 39.2
2023-03-13 23:59:38 - 39.59

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 00:00:36 - 39.59	2023-03-13 00:34:36 - 39.55	2023-03-13 01:08:36 - 39.41
2023-03-13 00:01:36 - 39.44	2023-03-13 00:35:36 - 39.49	2023-03-13 01:09:36 - 39.38
2023-03-13 00:02:36 - 39.5	2023-03-13 00:36:36 - 39.61	2023-03-13 01:10:36 - 39.57
2023-03-13 00:03:36 - 39.53	2023-03-13 00:37:36 - 39.59	2023-03-13 01:11:36 - 39.44
2023-03-13 00:04:36 - 39.54	2023-03-13 00:38:36 - 39.6	2023-03-13 01:12:36 - 39.47
2023-03-13 00:05:36 - 39.56	2023-03-13 00:39:36 - 39.58	2023-03-13 01:13:36 - 39.46
2023-03-13 00:06:36 - 39.57	2023-03-13 00:40:36 - 39.53	2023-03-13 01:14:36 - 39.29
2023-03-13 00:07:36 - 39.54	2023-03-13 00:41:36 - 39.54	2023-03-13 01:15:36 - 39.39
2023-03-13 00:08:36 - 39.55	2023-03-13 00:42:36 - 39.61	2023-03-13 01:16:36 - 39.45
2023-03-13 00:09:36 - 39.67	2023-03-13 00:43:36 - 39.54	2023-03-13 01:17:36 - 39.4
2023-03-13 00:10:36 - 39.56	2023-03-13 00:44:36 - 39.5	2023-03-13 01:18:36 - 39.42
2023-03-13 00:11:36 - 39.59	2023-03-13 00:45:36 - 39.69	2023-03-13 01:19:36 - 39.48
2023-03-13 00:12:36 - 39.63	2023-03-13 00:46:36 - 39.45	2023-03-13 01:20:36 - 39.57
2023-03-13 00:13:36 - 39.56	2023-03-13 00:47:36 - 39.53	2023-03-13 01:21:36 - 39.42
2023-03-13 00:14:36 - 39.48	2023-03-13 00:48:36 - 39.6	2023-03-13 01:22:36 - 39.44
2023-03-13 00:15:36 - 39.52	2023-03-13 00:49:36 - 39.58	2023-03-13 01:23:36 - 39.35
2023-03-13 00:16:36 - 39.55	2023-03-13 00:50:36 - 39.38	2023-03-13 01:24:36 - 39.4
2023-03-13 00:17:36 - 39.57	2023-03-13 00:51:36 - 39.6	2023-03-13 01:25:36 - 39.42
2023-03-13 00:18:36 - 39.5	2023-03-13 00:52:36 - 39.53	2023-03-13 01:26:36 - 39.4
2023-03-13 00:19:36 - 39.53	2023-03-13 00:53:36 - 39.58	2023-03-13 01:27:36 - 39.4
2023-03-13 00:20:36 - 39.54	2023-03-13 00:54:36 - 39.58	2023-03-13 01:28:36 - 39.43
2023-03-13 00:21:36 - 39.53	2023-03-13 00:55:36 - 39.54	2023-03-13 01:29:36 - 39.44
2023-03-13 00:22:36 - 39.55	2023-03-13 00:56:36 - 39.41	2023-03-13 01:30:36 - 39.42
2023-03-13 00:23:36 - 39.59	2023-03-13 00:57:36 - 39.58	2023-03-13 01:31:36 - 39.48
2023-03-13 00:24:36 - 39.46	2023-03-13 00:58:36 - 39.37	2023-03-13 01:32:36 - 39.33
2023-03-13 00:25:36 - 39.57	2023-03-13 00:59:36 - 39.25	2023-03-13 01:33:36 - 39.28
2023-03-13 00:26:36 - 39.54	2023-03-13 01:00:36 - 39.41	2023-03-13 01:34:36 - 39.31
2023-03-13 00:27:36 - 39.53	2023-03-13 01:01:36 - 39.38	2023-03-13 01:35:36 - 39.47
2023-03-13 00:28:36 - 39.62	2023-03-13 01:02:36 - 39.31	2023-03-13 01:36:36 - 39.44
2023-03-13 00:29:36 - 39.55	2023-03-13 01:03:36 - 39.32	2023-03-13 01:37:36 - 39.38
2023-03-13 00:30:36 - 39.56	2023-03-13 01:04:36 - 39.4	2023-03-13 01:38:36 - 39.3
2023-03-13 00:31:36 - 39.5	2023-03-13 01:05:36 - 39.48	2023-03-13 01:39:36 - 39.43
2023-03-13 00:32:36 - 39.57	2023-03-13 01:06:36 - 39.4	2023-03-13 01:40:36 - 39.53
2023-03-13 00:33:36 - 39.52	2023-03-13 01:07:36 - 39.48	2023-03-13 01:41:36 - 39.42

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 01:42:36 - 39.36	2023-03-13 02:16:36 - 39.31	2023-03-13 02:50:36 - 39.19
2023-03-13 01:43:36 - 39.45	2023-03-13 02:17:36 - 39.39	2023-03-13 02:51:36 - 39.32
2023-03-13 01:44:36 - 39.37	2023-03-13 02:18:36 - 39.27	2023-03-13 02:52:36 - 39.28
2023-03-13 01:45:36 - 39.44	2023-03-13 02:19:36 - 39.41	2023-03-13 02:53:36 - 39.2
2023-03-13 01:46:36 - 39.41	2023-03-13 02:20:36 - 39.27	2023-03-13 02:54:36 - 39.42
2023-03-13 01:47:36 - 39.42	2023-03-13 02:21:36 - 39.3	2023-03-13 02:55:36 - 39.3
2023-03-13 01:48:36 - 39.41	2023-03-13 02:22:36 - 39.27	2023-03-13 02:56:36 - 39.18
2023-03-13 01:49:36 - 39.37	2023-03-13 02:23:36 - 39.33	2023-03-13 02:57:36 - 39.28
2023-03-13 01:50:36 - 39.43	2023-03-13 02:24:36 - 39.42	2023-03-13 02:58:36 - 39.36
2023-03-13 01:51:36 - 39.43	2023-03-13 02:25:36 - 39.46	2023-03-13 02:59:36 - 39.75
2023-03-13 01:52:36 - 39.41	2023-03-13 02:26:36 - 39.33	2023-03-13 03:00:36 - 39.23
2023-03-13 01:53:36 - 39.39	2023-03-13 02:27:36 - 39.32	2023-03-13 03:01:36 - 39.29
2023-03-13 01:54:36 - 39.42	2023-03-13 02:28:36 - 39.32	2023-03-13 03:02:36 - 39.1
2023-03-13 01:55:36 - 39.46	2023-03-13 02:29:36 - 39.38	2023-03-13 03:03:36 - 39.19
2023-03-13 01:56:36 - 39.33	2023-03-13 02:30:36 - 39.3	2023-03-13 03:04:36 - 39.17
2023-03-13 01:57:36 - 39.21	2023-03-13 02:31:36 - 39.34	2023-03-13 03:05:36 - 39.08
2023-03-13 01:58:36 - 39.48	2023-03-13 02:32:36 - 39.39	2023-03-13 03:06:36 - 39.25
2023-03-13 01:59:36 - 39.45	2023-03-13 02:33:36 - 39.23	2023-03-13 03:07:36 - 39.18
2023-03-13 02:00:36 - 39.32	2023-03-13 02:34:36 - 39.46	2023-03-13 03:08:36 - 39.17
2023-03-13 02:01:36 - 39.37	2023-03-13 02:35:36 - 39.33	2023-03-13 03:09:36 - 39.18
2023-03-13 02:02:36 - 39.29	2023-03-13 02:36:36 - 39.33	2023-03-13 03:10:36 - 39.22
2023-03-13 02:03:36 - 39.26	2023-03-13 02:37:36 - 39.34	2023-03-13 03:11:36 - 39.13
2023-03-13 02:04:36 - 39.35	2023-03-13 02:38:36 - 39.26	2023-03-13 03:12:36 - 39.16
2023-03-13 02:05:36 - 39.26	2023-03-13 02:39:36 - 39.34	2023-03-13 03:13:36 - 39.15
2023-03-13 02:06:36 - 39.34	2023-03-13 02:40:36 - 39.31	2023-03-13 03:14:36 - 39.05
2023-03-13 02:07:36 - 39.22	2023-03-13 02:41:36 - 39.38	2023-03-13 03:15:36 - 39.14
2023-03-13 02:08:36 - 39.34	2023-03-13 02:42:36 - 39.21	2023-03-13 03:16:36 - 39.2
2023-03-13 02:09:36 - 39.31	2023-03-13 02:43:36 - 39.35	2023-03-13 03:17:36 - 39.16
2023-03-13 02:10:36 - 39.38	2023-03-13 02:44:36 - 39.32	2023-03-13 03:18:36 - 39.14
2023-03-13 02:11:36 - 39.16	2023-03-13 02:45:36 - 39.29	2023-03-13 03:19:36 - 39.19
2023-03-13 02:12:36 - 39.29	2023-03-13 02:46:36 - 39.32	2023-03-13 03:20:36 - 39.17
2023-03-13 02:13:36 - 39.29	2023-03-13 02:47:36 - 39.14	2023-03-13 03:21:36 - 39.16
2023-03-13 02:14:36 - 39.4	2023-03-13 02:48:36 - 39.42	2023-03-13 03:22:36 - 39.19
2023-03-13 02:15:36 - 39.28	2023-03-13 02:49:36 - 39.24	2023-03-13 03:23:36 - 39.22

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 03:24:36 - 39.25	2023-03-13 03:58:36 - 39.15	2023-03-13 04:32:36 - 39.09
2023-03-13 03:25:36 - 39.13	2023-03-13 03:59:36 - 38.68	2023-03-13 04:33:36 - 39.08
2023-03-13 03:26:36 - 39.1	2023-03-13 04:00:36 - 39.08	2023-03-13 04:34:36 - 39.07
2023-03-13 03:27:36 - 39.13	2023-03-13 04:01:36 - 39.0	2023-03-13 04:35:36 - 39.1
2023-03-13 03:28:36 - 39.2	2023-03-13 04:02:36 - 39.07	2023-03-13 04:36:36 - 39.08
2023-03-13 03:29:36 - 39.17	2023-03-13 04:03:36 - 39.06	2023-03-13 04:37:36 - 39.06
2023-03-13 03:30:36 - 39.18	2023-03-13 04:04:36 - 39.08	2023-03-13 04:38:36 - 38.91
2023-03-13 03:31:36 - 39.15	2023-03-13 04:05:36 - 39.06	2023-03-13 04:39:36 - 39.03
2023-03-13 03:32:36 - 39.19	2023-03-13 04:06:36 - 39.1	2023-03-13 04:40:36 - 39.09
2023-03-13 03:33:36 - 39.1	2023-03-13 04:07:36 - 39.17	2023-03-13 04:41:36 - 39.04
2023-03-13 03:34:36 - 39.17	2023-03-13 04:08:36 - 39.09	2023-03-13 04:42:36 - 38.96
2023-03-13 03:35:36 - 39.2	2023-03-13 04:09:36 - 39.15	2023-03-13 04:43:36 - 39.05
2023-03-13 03:36:36 - 39.16	2023-03-13 04:10:36 - 39.0	2023-03-13 04:44:36 - 39.08
2023-03-13 03:37:36 - 39.31	2023-03-13 04:11:36 - 38.95	2023-03-13 04:45:36 - 39.06
2023-03-13 03:38:36 - 39.18	2023-03-13 04:12:36 - 39.27	2023-03-13 04:46:36 - 38.96
2023-03-13 03:39:36 - 39.2	2023-03-13 04:13:36 - 39.06	2023-03-13 04:47:36 - 39.08
2023-03-13 03:40:36 - 39.18	2023-03-13 04:14:36 - 39.03	2023-03-13 04:48:36 - 39.06
2023-03-13 03:41:36 - 39.09	2023-03-13 04:15:36 - 39.13	2023-03-13 04:49:36 - 39.0
2023-03-13 03:42:36 - 39.14	2023-03-13 04:16:36 - 39.04	2023-03-13 04:50:36 - 39.06
2023-03-13 03:43:36 - 39.09	2023-03-13 04:17:36 - 38.99	2023-03-13 04:51:36 - 39.27
2023-03-13 03:44:36 - 39.26	2023-03-13 04:18:36 - 38.94	2023-03-13 04:52:36 - 39.07
2023-03-13 03:45:36 - 39.1	2023-03-13 04:19:36 - 39.09	2023-03-13 04:53:36 - 39.02
2023-03-13 03:46:36 - 39.14	2023-03-13 04:20:36 - 39.07	2023-03-13 04:54:36 - 39.07
2023-03-13 03:47:36 - 39.21	2023-03-13 04:21:36 - 38.98	2023-03-13 04:55:36 - 39.04
2023-03-13 03:48:36 - 39.17	2023-03-13 04:22:36 - 39.07	2023-03-13 04:56:36 - 39.09
2023-03-13 03:49:36 - 39.14	2023-03-13 04:23:36 - 39.05	2023-03-13 04:57:36 - 39.06
2023-03-13 03:50:36 - 39.16	2023-03-13 04:24:36 - 39.01	2023-03-13 04:58:36 - 39.13
2023-03-13 03:51:36 - 39.14	2023-03-13 04:25:36 - 39.06	2023-03-13 04:59:36 - 39.14
2023-03-13 03:52:36 - 39.15	2023-03-13 04:26:36 - 39.0	2023-03-13 05:00:36 - 38.44
2023-03-13 03:53:36 - 39.16	2023-03-13 04:27:36 - 39.13	2023-03-13 05:01:36 - 38.49
2023-03-13 03:54:36 - 39.18	2023-03-13 04:28:36 - 39.04	2023-03-13 05:02:36 - 38.47
2023-03-13 03:55:36 - 39.23	2023-03-13 04:29:36 - 38.99	2023-03-13 05:03:36 - 38.51
2023-03-13 03:56:36 - 39.15	2023-03-13 04:30:36 - 39.07	2023-03-13 05:04:36 - 38.53
2023-03-13 03:57:36 - 39.16	2023-03-13 04:31:36 - 39.0	2023-03-13 05:05:36 - 38.46

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 05:06:36 - 38.49	2023-03-13 05:40:36 - 38.48	2023-03-13 06:14:36 - 38.45
2023-03-13 05:07:36 - 38.48	2023-03-13 05:41:36 - 38.4	2023-03-13 06:15:36 - 38.56
2023-03-13 05:08:36 - 38.46	2023-03-13 05:42:36 - 38.54	2023-03-13 06:16:36 - 38.65
2023-03-13 05:09:36 - 38.47	2023-03-13 05:43:36 - 38.42	2023-03-13 06:17:36 - 38.59
2023-03-13 05:10:36 - 38.5	2023-03-13 05:44:36 - 38.46	2023-03-13 06:18:36 - 38.56
2023-03-13 05:11:36 - 38.47	2023-03-13 05:45:36 - 38.48	2023-03-13 06:19:36 - 38.5
2023-03-13 05:12:36 - 38.43	2023-03-13 05:46:36 - 38.45	2023-03-13 06:20:36 - 38.66
2023-03-13 05:13:36 - 38.41	2023-03-13 05:47:36 - 38.52	2023-03-13 06:21:36 - 38.53
2023-03-13 05:14:36 - 38.49	2023-03-13 05:48:36 - 38.47	2023-03-13 06:22:36 - 38.58
2023-03-13 05:15:36 - 38.38	2023-03-13 05:49:36 - 38.43	2023-03-13 06:23:36 - 38.57
2023-03-13 05:16:36 - 38.46	2023-03-13 05:50:36 - 38.44	2023-03-13 06:24:36 - 38.51
2023-03-13 05:17:36 - 38.51	2023-03-13 05:51:36 - 38.62	2023-03-13 06:25:36 - 38.48
2023-03-13 05:18:36 - 38.54	2023-03-13 05:52:36 - 38.44	2023-03-13 06:26:36 - 38.55
2023-03-13 05:19:36 - 38.48	2023-03-13 05:53:36 - 38.48	2023-03-13 06:27:36 - 38.55
2023-03-13 05:20:36 - 38.45	2023-03-13 05:54:36 - 38.55	2023-03-13 06:28:36 - 38.54
2023-03-13 05:21:36 - 38.46	2023-03-13 05:55:36 - 38.59	2023-03-13 06:29:36 - 38.59
2023-03-13 05:22:36 - 38.51	2023-03-13 05:56:36 - 38.41	2023-03-13 06:30:36 - 38.54
2023-03-13 05:23:36 - 38.5	2023-03-13 05:57:36 - 38.5	2023-03-13 06:31:36 - 38.58
2023-03-13 05:24:36 - 38.46	2023-03-13 05:58:36 - 38.45	2023-03-13 06:32:36 - 38.59
2023-03-13 05:25:36 - 38.58	2023-03-13 05:59:36 - 38.62	2023-03-13 06:33:36 - 38.58
2023-03-13 05:26:36 - 38.48	2023-03-13 06:00:36 - 38.58	2023-03-13 06:34:36 - 38.57
2023-03-13 05:27:36 - 38.51	2023-03-13 06:01:36 - 38.58	2023-03-13 06:35:36 - 38.58
2023-03-13 05:28:36 - 38.51	2023-03-13 06:02:36 - 38.62	2023-03-13 06:36:36 - 38.56
2023-03-13 05:29:36 - 38.47	2023-03-13 06:03:36 - 38.54	2023-03-13 06:37:36 - 38.55
2023-03-13 05:30:36 - 38.48	2023-03-13 06:04:36 - 38.59	2023-03-13 06:38:36 - 38.56
2023-03-13 05:31:36 - 38.37	2023-03-13 06:05:36 - 38.62	2023-03-13 06:39:36 - 38.4
2023-03-13 05:32:36 - 38.48	2023-03-13 06:06:36 - 38.57	2023-03-13 06:40:36 - 38.57
2023-03-13 05:33:36 - 38.56	2023-03-13 06:07:36 - 38.47	2023-03-13 06:41:36 - 38.58
2023-03-13 05:34:36 - 38.47	2023-03-13 06:08:36 - 38.74	2023-03-13 06:42:36 - 38.57
2023-03-13 05:35:36 - 38.43	2023-03-13 06:09:36 - 38.55	2023-03-13 06:43:36 - 38.59
2023-03-13 05:36:36 - 38.48	2023-03-13 06:10:36 - 38.7	2023-03-13 06:44:36 - 38.6
2023-03-13 05:37:36 - 38.42	2023-03-13 06:11:36 - 38.47	2023-03-13 06:45:36 - 38.37
2023-03-13 05:38:36 - 38.49	2023-03-13 06:12:36 - 38.62	2023-03-13 06:46:36 - 38.55
2023-03-13 05:39:36 - 38.48	2023-03-13 06:13:36 - 38.53	2023-03-13 06:47:36 - 38.55

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 06:48:36 - 38.57	2023-03-13 07:22:36 - 34.21	2023-03-13 07:56:36 - 34.25
2023-03-13 06:49:36 - 38.56	2023-03-13 07:23:36 - 34.18	2023-03-13 07:57:36 - 34.21
2023-03-13 06:50:36 - 38.57	2023-03-13 07:24:36 - 34.18	2023-03-13 07:58:36 - 34.29
2023-03-13 06:51:36 - 38.58	2023-03-13 07:25:36 - 34.32	2023-03-13 07:59:36 - 33.98
2023-03-13 06:52:36 - 38.42	2023-03-13 07:26:36 - 34.31	2023-03-13 08:00:36 - 34.59
2023-03-13 06:53:36 - 38.57	2023-03-13 07:27:36 - 34.19	2023-03-13 08:01:36 - 34.71
2023-03-13 06:54:36 - 38.44	2023-03-13 07:28:36 - 34.21	2023-03-13 08:02:36 - 34.63
2023-03-13 06:55:36 - 38.53	2023-03-13 07:29:36 - 34.18	2023-03-13 08:03:36 - 34.56
2023-03-13 06:56:36 - 38.63	2023-03-13 07:30:36 - 34.18	2023-03-13 08:04:36 - 34.66
2023-03-13 06:57:36 - 38.64	2023-03-13 07:31:36 - 34.16	2023-03-13 08:05:36 - 34.58
2023-03-13 06:58:36 - 38.4	2023-03-13 07:32:36 - 34.19	2023-03-13 08:06:36 - 34.41
2023-03-13 06:59:36 - 38.75	2023-03-13 07:33:36 - 34.33	2023-03-13 08:07:36 - 34.59
2023-03-13 07:00:36 - 34.16	2023-03-13 07:34:36 - 34.19	2023-03-13 08:08:36 - 34.55
2023-03-13 07:01:36 - 34.19	2023-03-13 07:35:36 - 34.2	2023-03-13 08:09:36 - 34.58
2023-03-13 07:02:36 - 34.16	2023-03-13 07:36:36 - 34.32	2023-03-13 08:10:36 - 34.6
2023-03-13 07:03:36 - 34.2	2023-03-13 07:37:36 - 34.23	2023-03-13 08:11:36 - 34.51
2023-03-13 07:04:36 - 34.27	2023-03-13 07:38:36 - 34.21	2023-03-13 08:12:36 - 34.56
2023-03-13 07:05:36 - 34.21	2023-03-13 07:39:36 - 34.18	2023-03-13 08:13:36 - 34.63
2023-03-13 07:06:36 - 34.26	2023-03-13 07:40:36 - 34.39	2023-03-13 08:14:36 - 34.61
2023-03-13 07:07:36 - 34.2	2023-03-13 07:41:36 - 34.19	2023-03-13 08:15:36 - 34.58
2023-03-13 07:08:36 - 34.18	2023-03-13 07:42:36 - 34.24	2023-03-13 08:16:36 - 34.69
2023-03-13 07:09:36 - 34.18	2023-03-13 07:43:36 - 34.18	2023-03-13 08:17:36 - 34.43
2023-03-13 07:10:36 - 34.2	2023-03-13 07:44:36 - 34.16	2023-03-13 08:18:36 - 34.72
2023-03-13 07:11:36 - 34.23	2023-03-13 07:45:36 - 34.24	2023-03-13 08:19:36 - 34.59
2023-03-13 07:12:36 - 34.25	2023-03-13 07:46:36 - 34.22	2023-03-13 08:20:36 - 34.63
2023-03-13 07:13:36 - 34.22	2023-03-13 07:47:36 - 34.32	2023-03-13 08:21:36 - 34.57
2023-03-13 07:14:36 - 34.21	2023-03-13 07:48:36 - 34.19	2023-03-13 08:22:36 - 34.5
2023-03-13 07:15:36 - 34.07	2023-03-13 07:49:36 - 34.25	2023-03-13 08:23:36 - 34.59
2023-03-13 07:16:36 - 34.19	2023-03-13 07:50:36 - 34.21	2023-03-13 08:24:36 - 34.57
2023-03-13 07:17:36 - 34.17	2023-03-13 07:51:36 - 34.24	2023-03-13 08:25:36 - 34.59
2023-03-13 07:18:36 - 34.18	2023-03-13 07:52:36 - 34.02	2023-03-13 08:26:36 - 34.59
2023-03-13 07:19:36 - 34.33	2023-03-13 07:53:36 - 34.14	2023-03-13 08:27:36 - 34.45
2023-03-13 07:20:36 - 34.21	2023-03-13 07:54:36 - 34.26	2023-03-13 08:28:36 - 34.67
2023-03-13 07:21:36 - 34.18	2023-03-13 07:55:36 - 34.21	2023-03-13 08:29:36 - 34.66

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 08:30:36 - 34.58	2023-03-13 09:04:36 - 37.03	2023-03-13 09:38:36 - 37.0
2023-03-13 08:31:36 - 34.65	2023-03-13 09:05:36 - 36.99	2023-03-13 09:39:36 - 36.95
2023-03-13 08:32:36 - 34.6	2023-03-13 09:06:36 - 37.04	2023-03-13 09:40:36 - 37.1
2023-03-13 08:33:36 - 34.55	2023-03-13 09:07:36 - 37.04	2023-03-13 09:41:36 - 37.02
2023-03-13 08:34:36 - 34.52	2023-03-13 09:08:36 - 37.01	2023-03-13 09:42:36 - 37.01
2023-03-13 08:35:36 - 34.57	2023-03-13 09:09:36 - 36.98	2023-03-13 09:43:36 - 37.08
2023-03-13 08:36:36 - 34.58	2023-03-13 09:10:36 - 36.86	2023-03-13 09:44:36 - 37.01
2023-03-13 08:37:36 - 34.63	2023-03-13 09:11:36 - 37.06	2023-03-13 09:45:36 - 37.04
2023-03-13 08:38:36 - 34.5	2023-03-13 09:12:36 - 36.97	2023-03-13 09:46:36 - 36.98
2023-03-13 08:39:36 - 34.57	2023-03-13 09:13:36 - 37.02	2023-03-13 09:47:36 - 37.01
2023-03-13 08:40:36 - 34.57	2023-03-13 09:14:36 - 37.0	2023-03-13 09:48:36 - 36.99
2023-03-13 08:41:36 - 34.41	2023-03-13 09:15:36 - 36.86	2023-03-13 09:49:36 - 37.11
2023-03-13 08:42:36 - 34.63	2023-03-13 09:16:36 - 36.94	2023-03-13 09:50:36 - 37.04
2023-03-13 08:43:36 - 34.58	2023-03-13 09:17:36 - 37.0	2023-03-13 09:51:36 - 37.01
2023-03-13 08:44:36 - 34.68	2023-03-13 09:18:36 - 37.01	2023-03-13 09:52:36 - 37.01
2023-03-13 08:45:36 - 34.76	2023-03-13 09:19:36 - 36.94	2023-03-13 09:53:36 - 36.9
2023-03-13 08:46:36 - 34.62	2023-03-13 09:20:36 - 36.99	2023-03-13 09:54:36 - 37.01
2023-03-13 08:47:36 - 34.53	2023-03-13 09:21:36 - 36.95	2023-03-13 09:55:36 - 37.03
2023-03-13 08:48:36 - 34.58	2023-03-13 09:22:36 - 37.0	2023-03-13 09:56:36 - 37.03
2023-03-13 08:49:36 - 34.62	2023-03-13 09:23:36 - 36.86	2023-03-13 09:57:36 - 36.91
2023-03-13 08:50:36 - 34.42	2023-03-13 09:24:36 - 37.08	2023-03-13 09:58:36 - 37.05
2023-03-13 08:51:36 - 34.56	2023-03-13 09:25:36 - 36.99	2023-03-13 09:59:36 - 37.66
2023-03-13 08:52:36 - 34.58	2023-03-13 09:26:36 - 37.04	2023-03-13 10:00:36 - 34.83
2023-03-13 08:53:36 - 34.54	2023-03-13 09:27:36 - 36.95	2023-03-13 10:01:36 - 34.99
2023-03-13 08:54:36 - 34.52	2023-03-13 09:28:36 - 37.05	2023-03-13 10:02:36 - 34.86
2023-03-13 08:55:36 - 34.67	2023-03-13 09:29:36 - 37.0	2023-03-13 10:03:36 - 34.78
2023-03-13 08:56:36 - 34.55	2023-03-13 09:30:36 - 36.97	2023-03-13 10:04:36 - 34.82
2023-03-13 08:57:36 - 34.5	2023-03-13 09:31:36 - 36.94	2023-03-13 10:05:36 - 34.89
2023-03-13 08:58:36 - 34.35	2023-03-13 09:32:36 - 37.03	2023-03-13 10:06:36 - 34.89
2023-03-13 08:59:36 - 34.78	2023-03-13 09:33:36 - 37.01	2023-03-13 10:07:36 - 34.87
2023-03-13 09:00:36 - 37.02	2023-03-13 09:34:36 - 37.05	2023-03-13 10:08:36 - 34.81
2023-03-13 09:01:36 - 36.91	2023-03-13 09:35:36 - 36.91	2023-03-13 10:09:36 - 34.86
2023-03-13 09:02:36 - 37.09	2023-03-13 09:36:36 - 37.03	2023-03-13 10:10:36 - 34.78
2023-03-13 09:03:36 - 36.99	2023-03-13 09:37:36 - 37.0	2023-03-13 10:11:36 - 34.93

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 10:12:36 - 34.85	2023-03-13 10:46:36 - 34.91	2023-03-13 11:20:36 - 39.58
2023-03-13 10:13:36 - 34.87	2023-03-13 10:47:36 - 34.86	2023-03-13 11:21:36 - 39.56
2023-03-13 10:14:36 - 34.81	2023-03-13 10:48:36 - 34.89	2023-03-13 11:22:36 - 39.57
2023-03-13 10:15:36 - 34.86	2023-03-13 10:49:36 - 34.82	2023-03-13 11:23:36 - 39.5
2023-03-13 10:16:36 - 34.84	2023-03-13 10:50:36 - 34.91	2023-03-13 11:24:36 - 39.53
2023-03-13 10:17:36 - 34.86	2023-03-13 10:51:36 - 34.66	2023-03-13 11:25:36 - 39.58
2023-03-13 10:18:36 - 34.95	2023-03-13 10:52:36 - 34.69	2023-03-13 11:26:36 - 39.57
2023-03-13 10:19:36 - 34.86	2023-03-13 10:53:36 - 34.87	2023-03-13 11:27:36 - 39.54
2023-03-13 10:20:36 - 34.95	2023-03-13 10:54:36 - 34.84	2023-03-13 11:28:36 - 39.59
2023-03-13 10:21:36 - 34.91	2023-03-13 10:55:36 - 34.92	2023-03-13 11:29:36 - 39.46
2023-03-13 10:22:36 - 34.88	2023-03-13 10:56:36 - 34.84	2023-03-13 11:30:36 - 39.57
2023-03-13 10:23:36 - 34.91	2023-03-13 10:57:36 - 34.78	2023-03-13 11:31:36 - 39.48
2023-03-13 10:24:36 - 34.83	2023-03-13 10:58:36 - 34.89	2023-03-13 11:32:36 - 39.54
2023-03-13 10:25:36 - 34.87	2023-03-13 10:59:36 - 34.22	2023-03-13 11:33:36 - 39.56
2023-03-13 10:26:36 - 34.96	2023-03-13 11:00:36 - 39.66	2023-03-13 11:34:36 - 39.44
2023-03-13 10:27:36 - 34.73	2023-03-13 11:01:36 - 39.5	2023-03-13 11:35:36 - 39.54
2023-03-13 10:28:36 - 35.0	2023-03-13 11:02:36 - 39.57	2023-03-13 11:36:36 - 39.59
2023-03-13 10:29:36 - 34.97	2023-03-13 11:03:36 - 39.44	2023-03-13 11:37:36 - 39.61
2023-03-13 10:30:36 - 34.94	2023-03-13 11:04:36 - 39.43	2023-03-13 11:38:36 - 39.57
2023-03-13 10:31:36 - 34.85	2023-03-13 11:05:36 - 39.56	2023-03-13 11:39:36 - 39.56
2023-03-13 10:32:36 - 34.93	2023-03-13 11:06:36 - 39.6	2023-03-13 11:40:36 - 39.46
2023-03-13 10:33:36 - 34.91	2023-03-13 11:07:36 - 39.62	2023-03-13 11:41:36 - 39.61
2023-03-13 10:34:36 - 34.9	2023-03-13 11:08:36 - 39.52	2023-03-13 11:42:36 - 39.58
2023-03-13 10:35:36 - 34.97	2023-03-13 11:09:36 - 39.52	2023-03-13 11:43:36 - 39.6
2023-03-13 10:36:36 - 34.74	2023-03-13 11:10:36 - 39.6	2023-03-13 11:44:36 - 39.6
2023-03-13 10:37:36 - 34.85	2023-03-13 11:11:36 - 39.62	2023-03-13 11:45:36 - 39.54
2023-03-13 10:38:36 - 34.88	2023-03-13 11:12:36 - 39.58	2023-03-13 11:46:36 - 39.49
2023-03-13 10:39:36 - 34.88	2023-03-13 11:13:36 - 39.55	2023-03-13 11:47:36 - 39.65
2023-03-13 10:40:36 - 34.91	2023-03-13 11:14:36 - 39.56	2023-03-13 11:48:36 - 39.63
2023-03-13 10:41:36 - 34.95	2023-03-13 11:15:36 - 39.57	2023-03-13 11:49:36 - 39.51
2023-03-13 10:42:36 - 34.87	2023-03-13 11:16:36 - 39.56	2023-03-13 11:50:36 - 39.62
2023-03-13 10:43:36 - 34.86	2023-03-13 11:17:36 - 39.54	2023-03-13 11:51:36 - 39.53
2023-03-13 10:44:36 - 34.89	2023-03-13 11:18:36 - 39.52	2023-03-13 11:52:36 - 39.55
2023-03-13 10:45:36 - 34.92	2023-03-13 11:19:36 - 39.54	2023-03-13 11:53:36 - 39.42

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 11:54:36 - 39.58	2023-03-13 12:28:36 - 38.64	2023-03-13 13:02:36 - 36.83
2023-03-13 11:55:36 - 39.63	2023-03-13 12:29:36 - 38.69	2023-03-13 13:03:36 - 36.82
2023-03-13 11:56:36 - 39.61	2023-03-13 12:30:36 - 38.62	2023-03-13 13:04:36 - 36.85
2023-03-13 11:57:36 - 39.53	2023-03-13 12:31:36 - 38.72	2023-03-13 13:05:36 - 36.76
2023-03-13 11:58:36 - 39.58	2023-03-13 12:32:36 - 38.72	2023-03-13 13:06:36 - 36.82
2023-03-13 11:59:36 - 39.87	2023-03-13 12:33:36 - 38.71	2023-03-13 13:07:36 - 36.71
2023-03-13 12:00:36 - 38.71	2023-03-13 12:34:36 - 38.77	2023-03-13 13:08:36 - 36.74
2023-03-13 12:01:36 - 38.75	2023-03-13 12:35:36 - 38.7	2023-03-13 13:09:36 - 36.72
2023-03-13 12:02:36 - 38.66	2023-03-13 12:36:36 - 38.66	2023-03-13 13:10:36 - 36.76
2023-03-13 12:03:36 - 38.75	2023-03-13 12:37:36 - 38.59	2023-03-13 13:11:36 - 36.82
2023-03-13 12:04:36 - 38.75	2023-03-13 12:38:36 - 38.71	2023-03-13 13:12:36 - 36.68
2023-03-13 12:05:36 - 38.63	2023-03-13 12:39:36 - 38.77	2023-03-13 13:13:36 - 36.81
2023-03-13 12:06:36 - 38.68	2023-03-13 12:40:36 - 38.66	2023-03-13 13:14:36 - 36.73
2023-03-13 12:07:36 - 38.7	2023-03-13 12:41:36 - 38.79	2023-03-13 13:15:36 - 36.77
2023-03-13 12:08:36 - 38.65	2023-03-13 12:42:36 - 38.62	2023-03-13 13:16:36 - 36.97
2023-03-13 12:09:36 - 38.5	2023-03-13 12:43:36 - 38.66	2023-03-13 13:17:36 - 36.82
2023-03-13 12:10:36 - 38.77	2023-03-13 12:44:36 - 38.78	2023-03-13 13:18:36 - 36.95
2023-03-13 12:11:36 - 38.7	2023-03-13 12:45:36 - 38.67	2023-03-13 13:19:36 - 36.83
2023-03-13 12:12:36 - 38.72	2023-03-13 12:46:36 - 38.72	2023-03-13 13:20:36 - 36.82
2023-03-13 12:13:36 - 38.69	2023-03-13 12:47:36 - 38.63	2023-03-13 13:21:36 - 36.86
2023-03-13 12:14:36 - 38.71	2023-03-13 12:48:36 - 38.72	2023-03-13 13:22:36 - 36.72
2023-03-13 12:15:36 - 38.68	2023-03-13 12:49:36 - 38.65	2023-03-13 13:23:36 - 36.84
2023-03-13 12:16:36 - 38.62	2023-03-13 12:50:36 - 38.6	2023-03-13 13:24:36 - 36.81
2023-03-13 12:17:36 - 38.74	2023-03-13 12:51:36 - 38.8	2023-03-13 13:25:36 - 36.75
2023-03-13 12:18:36 - 38.67	2023-03-13 12:52:36 - 38.83	2023-03-13 13:26:36 - 36.77
2023-03-13 12:19:36 - 38.79	2023-03-13 12:53:36 - 38.74	2023-03-13 13:27:36 - 36.82
2023-03-13 12:20:36 - 38.69	2023-03-13 12:54:36 - 38.67	2023-03-13 13:28:36 - 36.84
2023-03-13 12:21:36 - 38.69	2023-03-13 12:55:36 - 38.77	2023-03-13 13:29:36 - 36.82
2023-03-13 12:22:36 - 38.74	2023-03-13 12:56:36 - 38.71	2023-03-13 13:30:36 - 36.91
2023-03-13 12:23:36 - 38.72	2023-03-13 12:57:36 - 38.67	2023-03-13 13:31:36 - 36.79
2023-03-13 12:24:36 - 38.51	2023-03-13 12:58:36 - 38.72	2023-03-13 13:32:36 - 36.87
2023-03-13 12:25:36 - 38.72	2023-03-13 12:59:36 - 38.93	2023-03-13 13:33:36 - 36.81
2023-03-13 12:26:36 - 38.71	2023-03-13 13:00:36 - 36.77	2023-03-13 13:34:36 - 36.83
2023-03-13 12:27:36 - 38.69	2023-03-13 13:01:36 - 36.78	2023-03-13 13:35:36 - 36.83

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 13:36:36 - 36.81	2023-03-13 14:10:36 - 35.33	2023-03-13 14:44:36 - 35.39
2023-03-13 13:37:36 - 36.8	2023-03-13 14:11:36 - 35.46	2023-03-13 14:45:36 - 35.28
2023-03-13 13:38:36 - 36.82	2023-03-13 14:12:36 - 35.34	2023-03-13 14:46:36 - 35.41
2023-03-13 13:39:36 - 36.82	2023-03-13 14:13:36 - 35.33	2023-03-13 14:47:36 - 35.29
2023-03-13 13:40:36 - 36.72	2023-03-13 14:14:36 - 35.3	2023-03-13 14:48:36 - 35.28
2023-03-13 13:41:36 - 37.0	2023-03-13 14:15:36 - 35.28	2023-03-13 14:49:36 - 35.35
2023-03-13 13:42:36 - 36.88	2023-03-13 14:16:36 - 35.44	2023-03-13 14:50:36 - 35.32
2023-03-13 13:43:36 - 36.82	2023-03-13 14:17:36 - 35.37	2023-03-13 14:51:36 - 35.33
2023-03-13 13:44:36 - 36.89	2023-03-13 14:18:36 - 35.42	2023-03-13 14:52:36 - 35.39
2023-03-13 13:45:36 - 36.71	2023-03-13 14:19:36 - 35.39	2023-03-13 14:53:36 - 35.39
2023-03-13 13:46:36 - 36.85	2023-03-13 14:20:36 - 35.43	2023-03-13 14:54:36 - 35.37
2023-03-13 13:47:36 - 36.81	2023-03-13 14:21:36 - 35.39	2023-03-13 14:55:36 - 35.39
2023-03-13 13:48:36 - 36.81	2023-03-13 14:22:36 - 35.39	2023-03-13 14:56:36 - 35.31
2023-03-13 13:49:36 - 36.72	2023-03-13 14:23:36 - 35.36	2023-03-13 14:57:36 - 35.37
2023-03-13 13:50:36 - 36.78	2023-03-13 14:24:36 - 35.37	2023-03-13 14:58:36 - 35.33
2023-03-13 13:51:36 - 36.85	2023-03-13 14:25:36 - 35.4	2023-03-13 14:59:36 - 34.67
2023-03-13 13:52:36 - 36.94	2023-03-13 14:26:36 - 35.35	2023-03-13 15:00:36 - 29.28
2023-03-13 13:53:36 - 36.84	2023-03-13 14:27:36 - 35.38	2023-03-13 15:01:36 - 29.29
2023-03-13 13:54:36 - 36.86	2023-03-13 14:28:36 - 35.36	2023-03-13 15:02:36 - 29.31
2023-03-13 13:55:36 - 36.8	2023-03-13 14:29:36 - 35.35	2023-03-13 15:03:36 - 29.26
2023-03-13 13:56:36 - 36.77	2023-03-13 14:30:36 - 35.43	2023-03-13 15:04:36 - 29.29
2023-03-13 13:57:36 - 36.79	2023-03-13 14:31:36 - 35.36	2023-03-13 15:05:36 - 29.28
2023-03-13 13:58:36 - 36.79	2023-03-13 14:32:36 - 35.35	2023-03-13 15:06:36 - 29.25
2023-03-13 13:59:36 - 37.29	2023-03-13 14:33:36 - 35.32	2023-03-13 15:07:36 - 29.37
2023-03-13 14:00:36 - 35.31	2023-03-13 14:34:36 - 35.35	2023-03-13 15:08:36 - 29.33
2023-03-13 14:01:36 - 35.41	2023-03-13 14:35:36 - 35.34	2023-03-13 15:09:36 - 29.23
2023-03-13 14:02:36 - 35.38	2023-03-13 14:36:36 - 35.38	2023-03-13 15:10:36 - 29.2
2023-03-13 14:03:36 - 35.32	2023-03-13 14:37:36 - 35.2	2023-03-13 15:11:36 - 29.18
2023-03-13 14:04:36 - 35.35	2023-03-13 14:38:36 - 35.38	2023-03-13 15:12:36 - 29.09
2023-03-13 14:05:36 - 35.38	2023-03-13 14:39:36 - 35.41	2023-03-13 15:13:36 - 29.23
2023-03-13 14:06:36 - 35.36	2023-03-13 14:40:36 - 35.37	2023-03-13 15:14:36 - 29.28
2023-03-13 14:07:36 - 35.36	2023-03-13 14:41:36 - 35.34	2023-03-13 15:15:36 - 29.33
2023-03-13 14:08:36 - 35.37	2023-03-13 14:42:36 - 35.39	2023-03-13 15:16:36 - 29.3
2023-03-13 14:09:36 - 35.53	2023-03-13 14:43:36 - 35.29	2023-03-13 15:17:36 - 29.29

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 15:18:36 - 29.28	2023-03-13 15:52:36 - 29.29	2023-03-13 16:26:36 - 33.08
2023-03-13 15:19:36 - 29.42	2023-03-13 15:53:36 - 29.25	2023-03-13 16:27:36 - 33.05
2023-03-13 15:20:36 - 29.32	2023-03-13 15:54:36 - 29.27	2023-03-13 16:28:36 - 33.03
2023-03-13 15:21:36 - 29.33	2023-03-13 15:55:36 - 29.28	2023-03-13 16:29:36 - 33.04
2023-03-13 15:22:36 - 29.31	2023-03-13 15:56:36 - 29.23	2023-03-13 16:30:36 - 33.08
2023-03-13 15:23:36 - 29.27	2023-03-13 15:57:36 - 29.31	2023-03-13 16:31:36 - 33.08
2023-03-13 15:24:36 - 29.28	2023-03-13 15:58:36 - 29.29	2023-03-13 16:32:36 - 33.19
2023-03-13 15:25:36 - 29.27	2023-03-13 15:59:36 - 30.38	2023-03-13 16:33:36 - 33.02
2023-03-13 15:26:36 - 29.3	2023-03-13 16:00:36 - 33.05	2023-03-13 16:34:36 - 33.04
2023-03-13 15:27:36 - 29.31	2023-03-13 16:01:36 - 33.01	2023-03-13 16:35:36 - 33.06
2023-03-13 15:28:36 - 29.35	2023-03-13 16:02:36 - 33.07	2023-03-13 16:36:36 - 33.06
2023-03-13 15:29:36 - 29.38	2023-03-13 16:03:36 - 33.03	2023-03-13 16:37:36 - 33.06
2023-03-13 15:30:36 - 29.2	2023-03-13 16:04:36 - 33.06	2023-03-13 16:38:36 - 33.03
2023-03-13 15:31:36 - 29.25	2023-03-13 16:05:36 - 33.04	2023-03-13 16:39:36 - 33.12
2023-03-13 15:32:36 - 29.2	2023-03-13 16:06:36 - 33.06	2023-03-13 16:40:36 - 33.07
2023-03-13 15:33:36 - 29.21	2023-03-13 16:07:36 - 33.11	2023-03-13 16:41:36 - 33.09
2023-03-13 15:34:36 - 29.29	2023-03-13 16:08:36 - 33.05	2023-03-13 16:42:36 - 33.08
2023-03-13 15:35:36 - 29.24	2023-03-13 16:09:36 - 33.12	2023-03-13 16:43:36 - 33.06
2023-03-13 15:36:36 - 29.29	2023-03-13 16:10:36 - 32.93	2023-03-13 16:44:36 - 33.09
2023-03-13 15:37:36 - 29.18	2023-03-13 16:11:36 - 33.06	2023-03-13 16:45:36 - 33.1
2023-03-13 15:38:36 - 29.29	2023-03-13 16:12:36 - 33.11	2023-03-13 16:46:36 - 33.0
2023-03-13 15:39:36 - 29.3	2023-03-13 16:13:36 - 33.05	2023-03-13 16:47:36 - 33.02
2023-03-13 15:40:36 - 29.29	2023-03-13 16:14:36 - 33.08	2023-03-13 16:48:36 - 32.92
2023-03-13 15:41:36 - 29.29	2023-03-13 16:15:36 - 33.12	2023-03-13 16:49:36 - 33.12
2023-03-13 15:42:36 - 29.34	2023-03-13 16:16:36 - 32.96	2023-03-13 16:50:36 - 33.04
2023-03-13 15:43:36 - 29.3	2023-03-13 16:17:36 - 33.1	2023-03-13 16:51:36 - 33.08
2023-03-13 15:44:36 - 29.22	2023-03-13 16:18:36 - 33.11	2023-03-13 16:52:36 - 33.06
2023-03-13 15:45:36 - 29.25	2023-03-13 16:19:36 - 33.02	2023-03-13 16:53:36 - 33.14
2023-03-13 15:46:36 - 29.22	2023-03-13 16:20:36 - 33.07	2023-03-13 16:54:36 - 33.11
2023-03-13 15:47:36 - 29.27	2023-03-13 16:21:36 - 33.05	2023-03-13 16:55:36 - 33.07
2023-03-13 15:48:36 - 29.22	2023-03-13 16:22:36 - 33.01	2023-03-13 16:56:36 - 33.06
2023-03-13 15:49:36 - 29.25	2023-03-13 16:23:36 - 33.02	2023-03-13 16:57:36 - 33.07
2023-03-13 15:50:36 - 29.19	2023-03-13 16:24:36 - 32.99	2023-03-13 16:58:36 - 33.08
2023-03-13 15:51:36 - 29.23	2023-03-13 16:25:36 - 33.09	2023-03-13 16:59:36 - 33.04

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 17:00:36 - 38.84	2023-03-13 17:34:36 - 38.78	2023-03-13 18:08:36 - 38.34
2023-03-13 17:01:36 - 38.79	2023-03-13 17:35:36 - 38.84	2023-03-13 18:09:36 - 38.33
2023-03-13 17:02:36 - 38.82	2023-03-13 17:36:36 - 38.86	2023-03-13 18:10:36 - 38.27
2023-03-13 17:03:36 - 38.79	2023-03-13 17:37:36 - 38.83	2023-03-13 18:11:36 - 38.39
2023-03-13 17:04:36 - 38.82	2023-03-13 17:38:36 - 38.74	2023-03-13 18:12:36 - 38.14
2023-03-13 17:05:36 - 38.82	2023-03-13 17:39:36 - 38.81	2023-03-13 18:13:36 - 38.34
2023-03-13 17:06:36 - 38.81	2023-03-13 17:40:36 - 38.94	2023-03-13 18:14:36 - 38.37
2023-03-13 17:07:36 - 38.8	2023-03-13 17:41:36 - 38.82	2023-03-13 18:15:36 - 38.37
2023-03-13 17:08:36 - 38.74	2023-03-13 17:42:36 - 38.83	2023-03-13 18:16:36 - 38.38
2023-03-13 17:09:36 - 38.83	2023-03-13 17:43:36 - 38.86	2023-03-13 18:17:36 - 38.22
2023-03-13 17:10:36 - 38.71	2023-03-13 17:44:36 - 38.89	2023-03-13 18:18:36 - 38.32
2023-03-13 17:11:36 - 38.75	2023-03-13 17:45:36 - 38.83	2023-03-13 18:19:36 - 38.36
2023-03-13 17:12:36 - 38.82	2023-03-13 17:46:36 - 38.73	2023-03-13 18:20:36 - 38.36
2023-03-13 17:13:36 - 38.85	2023-03-13 17:47:36 - 38.73	2023-03-13 18:21:36 - 38.24
2023-03-13 17:14:36 - 38.8	2023-03-13 17:48:36 - 38.83	2023-03-13 18:22:36 - 38.31
2023-03-13 17:15:36 - 38.77	2023-03-13 17:49:36 - 38.83	2023-03-13 18:23:36 - 38.33
2023-03-13 17:16:36 - 38.78	2023-03-13 17:50:36 - 38.87	2023-03-13 18:24:36 - 38.31
2023-03-13 17:17:36 - 38.78	2023-03-13 17:51:36 - 38.9	2023-03-13 18:25:36 - 38.28
2023-03-13 17:18:36 - 38.83	2023-03-13 17:52:36 - 38.78	2023-03-13 18:26:36 - 38.32
2023-03-13 17:19:36 - 38.89	2023-03-13 17:53:36 - 38.81	2023-03-13 18:27:36 - 38.38
2023-03-13 17:20:36 - 38.8	2023-03-13 17:54:36 - 38.77	2023-03-13 18:28:36 - 38.34
2023-03-13 17:21:36 - 38.79	2023-03-13 17:55:36 - 38.79	2023-03-13 18:29:36 - 38.31
2023-03-13 17:22:36 - 38.8	2023-03-13 17:56:36 - 38.72	2023-03-13 18:30:36 - 38.4
2023-03-13 17:23:36 - 38.95	2023-03-13 17:57:36 - 38.81	2023-03-13 18:31:36 - 38.35
2023-03-13 17:24:36 - 38.73	2023-03-13 17:58:36 - 38.73	2023-03-13 18:32:36 - 38.44
2023-03-13 17:25:36 - 38.79	2023-03-13 17:59:36 - 38.81	2023-03-13 18:33:36 - 38.43
2023-03-13 17:26:36 - 38.84	2023-03-13 18:00:36 - 38.32	2023-03-13 18:34:36 - 38.33
2023-03-13 17:27:36 - 38.81	2023-03-13 18:01:36 - 38.26	2023-03-13 18:35:36 - 38.32
2023-03-13 17:28:36 - 38.79	2023-03-13 18:02:36 - 38.37	2023-03-13 18:36:36 - 38.25
2023-03-13 17:29:36 - 38.88	2023-03-13 18:03:36 - 38.33	2023-03-13 18:37:36 - 38.32
2023-03-13 17:30:36 - 38.85	2023-03-13 18:04:36 - 38.3	2023-03-13 18:38:36 - 38.29
2023-03-13 17:31:36 - 38.83	2023-03-13 18:05:36 - 38.27	2023-03-13 18:39:36 - 38.3
2023-03-13 17:32:36 - 38.76	2023-03-13 18:06:36 - 38.31	2023-03-13 18:40:36 - 38.38
2023-03-13 17:33:36 - 38.78	2023-03-13 18:07:36 - 38.26	2023-03-13 18:41:36 - 38.32

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 18:42:36 - 38.37	2023-03-13 19:16:36 - 39.06	2023-03-13 19:50:36 - 39.03
2023-03-13 18:43:36 - 38.25	2023-03-13 19:17:36 - 39.11	2023-03-13 19:51:36 - 39.03
2023-03-13 18:44:36 - 38.28	2023-03-13 19:18:36 - 39.06	2023-03-13 19:52:36 - 39.09
2023-03-13 18:45:36 - 38.27	2023-03-13 19:19:36 - 39.01	2023-03-13 19:53:36 - 39.17
2023-03-13 18:46:36 - 38.42	2023-03-13 19:20:36 - 39.1	2023-03-13 19:54:36 - 39.07
2023-03-13 18:47:36 - 38.31	2023-03-13 19:21:36 - 39.05	2023-03-13 19:55:36 - 39.1
2023-03-13 18:48:36 - 38.31	2023-03-13 19:22:36 - 39.11	2023-03-13 19:56:36 - 39.06
2023-03-13 18:49:36 - 38.28	2023-03-13 19:23:36 - 39.06	2023-03-13 19:57:36 - 39.04
2023-03-13 18:50:36 - 38.31	2023-03-13 19:24:36 - 39.07	2023-03-13 19:58:36 - 39.21
2023-03-13 18:51:36 - 38.22	2023-03-13 19:25:36 - 39.08	2023-03-13 19:59:36 - 38.31
2023-03-13 18:52:36 - 38.38	2023-03-13 19:26:36 - 39.02	2023-03-13 20:00:36 - 39.24
2023-03-13 18:53:36 - 38.34	2023-03-13 19:27:36 - 39.03	2023-03-13 20:01:36 - 39.27
2023-03-13 18:54:36 - 38.36	2023-03-13 19:28:36 - 39.14	2023-03-13 20:02:36 - 39.31
2023-03-13 18:55:36 - 38.1	2023-03-13 19:29:36 - 39.15	2023-03-13 20:03:36 - 39.29
2023-03-13 18:56:36 - 38.34	2023-03-13 19:30:36 - 39.08	2023-03-13 20:04:36 - 39.22
2023-03-13 18:57:36 - 38.29	2023-03-13 19:31:36 - 39.08	2023-03-13 20:05:36 - 39.31
2023-03-13 18:58:36 - 38.34	2023-03-13 19:32:36 - 39.05	2023-03-13 20:06:36 - 39.3
2023-03-13 18:59:36 - 38.48	2023-03-13 19:33:36 - 39.06	2023-03-13 20:07:36 - 39.32
2023-03-13 19:00:36 - 39.06	2023-03-13 19:34:36 - 39.07	2023-03-13 20:08:36 - 39.36
2023-03-13 19:01:36 - 39.05	2023-03-13 19:35:36 - 39.1	2023-03-13 20:09:36 - 39.22
2023-03-13 19:02:36 - 38.9	2023-03-13 19:36:36 - 39.1	2023-03-13 20:10:36 - 39.33
2023-03-13 19:03:36 - 39.06	2023-03-13 19:37:36 - 39.06	2023-03-13 20:11:36 - 39.25
2023-03-13 19:04:36 - 39.06	2023-03-13 19:38:36 - 39.04	2023-03-13 20:12:36 - 39.32
2023-03-13 19:05:36 - 39.02	2023-03-13 19:39:36 - 39.02	2023-03-13 20:13:36 - 39.25
2023-03-13 19:06:36 - 39.12	2023-03-13 19:40:36 - 39.14	2023-03-13 20:14:36 - 39.24
2023-03-13 19:07:36 - 39.02	2023-03-13 19:41:36 - 39.26	2023-03-13 20:15:36 - 39.27
2023-03-13 19:08:36 - 39.16	2023-03-13 19:42:36 - 39.03	2023-03-13 20:16:36 - 39.31
2023-03-13 19:09:36 - 39.07	2023-03-13 19:43:36 - 39.07	2023-03-13 20:17:36 - 39.29
2023-03-13 19:10:36 - 39.07	2023-03-13 19:44:36 - 39.06	2023-03-13 20:18:36 - 39.3
2023-03-13 19:11:36 - 39.09	2023-03-13 19:45:36 - 39.08	2023-03-13 20:19:36 - 39.35
2023-03-13 19:12:36 - 39.14	2023-03-13 19:46:36 - 39.07	2023-03-13 20:20:36 - 39.32
2023-03-13 19:13:36 - 39.05	2023-03-13 19:47:36 - 39.06	2023-03-13 20:21:36 - 39.23
2023-03-13 19:14:36 - 39.0	2023-03-13 19:48:36 - 39.04	2023-03-13 20:22:36 - 39.36
2023-03-13 19:15:36 - 38.9	2023-03-13 19:49:36 - 39.14	2023-03-13 20:23:36 - 39.28

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 20:24:36 - 39.26	2023-03-13 20:58:36 - 39.28	2023-03-13 21:32:36 - 38.91
2023-03-13 20:25:36 - 39.24	2023-03-13 20:59:36 - 39.47	2023-03-13 21:33:36 - 38.9
2023-03-13 20:26:36 - 39.22	2023-03-13 21:00:36 - 38.88	2023-03-13 21:34:36 - 38.99
2023-03-13 20:27:36 - 39.25	2023-03-13 21:01:36 - 38.9	2023-03-13 21:35:36 - 38.91
2023-03-13 20:28:36 - 39.18	2023-03-13 21:02:36 - 38.8	2023-03-13 21:36:36 - 38.98
2023-03-13 20:29:36 - 39.26	2023-03-13 21:03:36 - 38.83	2023-03-13 21:37:36 - 38.77
2023-03-13 20:30:36 - 39.39	2023-03-13 21:04:36 - 38.9	2023-03-13 21:38:36 - 38.78
2023-03-13 20:31:36 - 39.27	2023-03-13 21:05:36 - 38.84	2023-03-13 21:39:36 - 38.91
2023-03-13 20:32:36 - 39.28	2023-03-13 21:06:36 - 38.86	2023-03-13 21:40:36 - 38.86
2023-03-13 20:33:36 - 39.37	2023-03-13 21:07:36 - 38.96	2023-03-13 21:41:36 - 38.91
2023-03-13 20:34:36 - 39.32	2023-03-13 21:08:36 - 38.9	2023-03-13 21:42:36 - 38.78
2023-03-13 20:35:36 - 39.25	2023-03-13 21:09:36 - 38.93	2023-03-13 21:43:36 - 38.86
2023-03-13 20:36:36 - 39.37	2023-03-13 21:10:36 - 38.89	2023-03-13 21:44:36 - 38.77
2023-03-13 20:37:36 - 39.28	2023-03-13 21:11:36 - 38.71	2023-03-13 21:45:36 - 38.87
2023-03-13 20:38:36 - 39.34	2023-03-13 21:12:36 - 38.98	2023-03-13 21:46:36 - 38.78
2023-03-13 20:39:36 - 39.35	2023-03-13 21:13:36 - 38.87	2023-03-13 21:47:36 - 38.86
2023-03-13 20:40:36 - 39.23	2023-03-13 21:14:36 - 38.85	2023-03-13 21:48:36 - 38.89
2023-03-13 20:41:36 - 39.3	2023-03-13 21:15:36 - 38.94	2023-03-13 21:49:36 - 38.91
2023-03-13 20:42:36 - 39.39	2023-03-13 21:16:36 - 38.9	2023-03-13 21:50:36 - 38.77
2023-03-13 20:43:36 - 39.29	2023-03-13 21:17:36 - 38.97	2023-03-13 21:51:36 - 39.15
2023-03-13 20:44:36 - 39.25	2023-03-13 21:18:36 - 38.88	2023-03-13 21:52:36 - 38.91
2023-03-13 20:45:36 - 39.3	2023-03-13 21:19:36 - 38.89	2023-03-13 21:53:36 - 38.83
2023-03-13 20:46:36 - 39.24	2023-03-13 21:20:36 - 38.84	2023-03-13 21:54:36 - 38.94
2023-03-13 20:47:36 - 39.28	2023-03-13 21:21:36 - 38.87	2023-03-13 21:55:36 - 38.88
2023-03-13 20:48:36 - 39.26	2023-03-13 21:22:36 - 38.88	2023-03-13 21:56:36 - 38.86
2023-03-13 20:49:36 - 39.27	2023-03-13 21:23:36 - 38.88	2023-03-13 21:57:36 - 38.86
2023-03-13 20:50:36 - 39.31	2023-03-13 21:24:36 - 38.84	2023-03-13 21:58:36 - 38.95
2023-03-13 20:51:36 - 39.27	2023-03-13 21:25:36 - 38.89	2023-03-13 21:59:36 - 38.9
2023-03-13 20:52:36 - 39.26	2023-03-13 21:26:36 - 38.9	2023-03-13 22:00:36 - 38.71
2023-03-13 20:53:36 - 39.29	2023-03-13 21:27:36 - 38.91	2023-03-13 22:01:36 - 38.69
2023-03-13 20:54:36 - 39.22	2023-03-13 21:28:36 - 38.86	2023-03-13 22:02:36 - 38.72
2023-03-13 20:55:36 - 39.47	2023-03-13 21:29:36 - 38.88	2023-03-13 22:03:36 - 38.69
2023-03-13 20:56:36 - 39.28	2023-03-13 21:30:36 - 38.85	2023-03-13 22:04:36 - 38.84
2023-03-13 20:57:36 - 39.17	2023-03-13 21:31:36 - 38.86	2023-03-13 22:05:36 - 38.74

Horário/Leitura	Horário/Leitura	Horário/Leitura
2023-03-13 22:06:36 - 38.72	2023-03-13 22:40:36 - 38.72	2023-03-13 23:14:36 - 39.16
2023-03-13 22:07:36 - 38.81	2023-03-13 22:41:36 - 38.73	2023-03-13 23:15:36 - 39.17
2023-03-13 22:08:36 - 38.72	2023-03-13 22:42:36 - 38.79	2023-03-13 23:16:36 - 39.32
2023-03-13 22:09:36 - 38.77	2023-03-13 22:43:36 - 38.78	2023-03-13 23:17:36 - 39.21
2023-03-13 22:10:36 - 38.79	2023-03-13 22:44:36 - 38.72	2023-03-13 23:18:36 - 39.18
2023-03-13 22:11:36 - 38.76	2023-03-13 22:45:36 - 38.67	2023-03-13 23:19:36 - 39.17
2023-03-13 22:12:36 - 38.53	2023-03-13 22:46:36 - 38.66	2023-03-13 23:20:36 - 39.1
2023-03-13 22:13:36 - 38.76	2023-03-13 22:47:36 - 38.67	2023-03-13 23:21:36 - 39.28
2023-03-13 22:14:36 - 38.75	2023-03-13 22:48:36 - 38.6	2023-03-13 23:22:36 - 39.14
2023-03-13 22:15:36 - 38.86	2023-03-13 22:49:36 - 38.75	2023-03-13 23:23:36 - 39.15
2023-03-13 22:16:36 - 38.73	2023-03-13 22:50:36 - 38.75	2023-03-13 23:24:36 - 39.13
2023-03-13 22:17:36 - 38.72	2023-03-13 22:51:36 - 38.75	2023-03-13 23:25:36 - 39.16
2023-03-13 22:18:36 - 38.71	2023-03-13 22:52:36 - 38.8	2023-03-13 23:26:36 - 39.2
2023-03-13 22:19:36 - 38.74	2023-03-13 22:53:36 - 38.73	2023-03-13 23:27:36 - 39.16
2023-03-13 22:20:36 - 38.62	2023-03-13 22:54:36 - 38.71	2023-03-13 23:28:36 - 39.12
2023-03-13 22:21:36 - 38.74	2023-03-13 22:55:36 - 38.71	2023-03-13 23:29:36 - 39.19
2023-03-13 22:22:36 - 38.66	2023-03-13 22:56:36 - 38.69	2023-03-13 23:30:36 - 39.15
2023-03-13 22:23:36 - 38.73	2023-03-13 22:57:36 - 38.83	2023-03-13 23:31:36 - 39.14
2023-03-13 22:24:36 - 38.71	2023-03-13 22:58:36 - 38.74	2023-03-13 23:32:36 - 39.13
2023-03-13 22:25:36 - 38.74	2023-03-13 22:59:36 - 38.11	2023-03-13 23:33:36 - 39.17
2023-03-13 22:26:36 - 38.69	2023-03-13 23:00:36 - 39.1	2023-03-13 23:34:36 - 39.09
2023-03-13 22:27:36 - 38.8	2023-03-13 23:01:36 - 39.13	2023-03-13 23:35:36 - 39.08
2023-03-13 22:28:36 - 38.71	2023-03-13 23:02:36 - 39.18	2023-03-13 23:36:36 - 39.02
2023-03-13 22:29:36 - 38.73	2023-03-13 23:03:36 - 39.17	2023-03-13 23:37:36 - 39.18
2023-03-13 22:30:36 - 38.73	2023-03-13 23:04:36 - 39.1	2023-03-13 23:38:36 - 39.07
2023-03-13 22:31:36 - 38.73	2023-03-13 23:05:36 - 39.16	2023-03-13 23:39:36 - 39.16
2023-03-13 22:32:36 - 38.66	2023-03-13 23:06:36 - 39.23	2023-03-13 23:40:36 - 39.13
2023-03-13 22:33:36 - 38.68	2023-03-13 23:07:36 - 39.1	2023-03-13 23:41:36 - 39.12
2023-03-13 22:34:36 - 38.7	2023-03-13 23:08:36 - 39.25	2023-03-13 23:42:36 - 39.16
2023-03-13 22:35:36 - 38.79	2023-03-13 23:09:36 - 39.15	2023-03-13 23:43:36 - 39.14
2023-03-13 22:36:36 - 38.98	2023-03-13 23:10:36 - 39.12	2023-03-13 23:44:36 - 39.07
2023-03-13 22:37:36 - 38.71	2023-03-13 23:11:36 - 39.14	2023-03-13 23:45:36 - 39.22
2023-03-13 22:38:36 - 38.73	2023-03-13 23:12:36 - 39.31	2023-03-13 23:46:36 - 39.22
2023-03-13 22:39:36 - 38.7	2023-03-13 23:13:36 - 39.14	2023-03-13 23:47:36 - 39.16

Horário/Leitura

2023-03-13 23:48:36 - 39.12
2023-03-13 23:49:36 - 39.15
2023-03-13 23:50:36 - 39.14
2023-03-13 23:51:36 - 39.16
2023-03-13 23:52:36 - 39.11
2023-03-13 23:53:36 - 39.22
2023-03-13 23:54:36 - 39.13
2023-03-13 23:55:36 - 39.15
2023-03-13 23:56:36 - 39.2
2023-03-13 23:57:36 - 39.16
2023-03-13 23:58:36 - 39.16
2023-03-13 23:59:36 - 38.16

	r1	r2	r3	r4	r5	r6	r7	r8
1:00	-0.01111	-0.03952	-0.01636	0.021972	0.036409	-0.03238	-0.10051	-0.01482
2:00	-0.00567	-0.03046	-0.0121	0.024637	0.041735	-0.02859	-0.09631	-0.01251
3:00	0.002676	-0.02386	-0.00593	0.028905	0.044241	-0.02562	-0.08992	-0.00839
4:00	0.009958	-0.01561	0.016574	0.03671	0.047014	-0.02126	-0.08545	-0.00575
5:00	0.031712	0.00247	0.148323	0.05404	0.057746	-0.00528	-0.06927	0.009177
6:00	0.058385	0.062277	0.158783	0.038392	0.068732	-0.00583	-0.06867	0.007072
7:00	0.11454	0.142361	0.016952	0.095641	0.090684	0.021339	0.055427	0.119098
8:00	0.14292	0.129547	0.159505	0.171014	0.049531	0.068025	0.095344	0.109542
9:00	0.131195	0.056364	0.091835	0.110723	0.135008	0.025495	0.05824	0.046988
10:00	0.137959	0.15818	0.154931	0.090258	0.069656	0.118253	0.102345	0.102347
11:00	0.160137	0.119993	0.145584	0.122116	0.069043	0.160344	0.126393	-0.01868
12:00	0.098464	0.128555	0.166934	0.062152	0.130219	0.104712	0.085578	0.003519
13:00	0.176821	0.020167	0.057095	0.049127	0.005065	-0.02995	0.11241	0.051884
14:00	0.125653	0.223171	0.114278	0.106039	0.026366	0.121277	0.125501	0.089746
15:00	0.154194	0.178193	0.224828	0.215936	0.212187	0.23253	0.231844	0.245828
16:00	0.120629	0.168289	0.184653	0.184758	0.157272	0.040923	0.041756	0.148656
17:00	0.001048	-0.02096	0.00372	0.04106	0.052399	-0.01719	-0.08993	0.000622
18:00	0.035031	0.088995	0.021896	0.106987	0.071267	0.001276	-0.07098	0.013268
19:00	-0.02617	-0.04053	-0.0229	0.021304	0.045517	-0.02045	-0.09828	-0.00582
20:00	-0.01796	-0.02945	-0.01364	0.026008	0.037637	-0.01966	-0.08408	-0.01167
21:00	0.004422	-0.01664	0.001047	0.045056	0.048663	-0.01636	-0.09464	-0.00116
22:00	0.073432	-0.00231	0.0118	0.048469	0.057734	-0.00934	-0.07488	0.002973
23:00	0.008217	-0.03431	-0.01595	0.019612	0.05081	0.004789	-0.09241	-0.00788

```html
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title>Ponto de Monitoramento</title>
5      <script>
6          let logging = false;
7          function control() {
8              logging = !logging;
9              let action = logging ? 'start' : 'stop';
10             document.getElementById('controlButton').innerText = logging
                   ? 'Parar registro' : ' Iniciar registro';
11             document.getElementById('statusText').innerText = logging ?
                   'Registro em andamento...' : '';
12
13             var xhr = new XMLHttpRequest();
14             xhr.open("GET", "/control?action=" + action, true);
15             xhr.send();
16         }
17         function clearData() {
18             var xhr = new XMLHttpRequest();
19             xhr.open("GET", "/clearData", true);
20             xhr.send();
21             xhr.onreadystatechange = function() {
22                 if(xhr.readyState == 4 && xhr.status == 200) {
23                     alert('Dados apagados com sucesso');
24                     location.reload();
25                 }
26             };
27         }
28         function updateStatus() {
29             var xhr = new XMLHttpRequest();
30             xhr.open("GET", "/status", true);
31             xhr.send();
32             xhr.onreadystatechange = function() {
33                 if(xhr.readyState == 4 && xhr.status == 200){
34                     logging = xhr.responseText == "1"
35                     document.getElementById("controlButton").innerText =
                           logging
36                         ? "Parar registro"
37                         : "Iniciar Registro";
38                     document.getElementById("statusText").innerText =
                           logging
39                         ? "Registro em andamento"
40                         : "";
41                 }
42             };
43         }
```

```
44          function loadData() {
45              upadteStatus();
46              var xhr = new XMLHttpRequest();
47              xhr.open("GET", "/data", true);
48              xhr.send();
49              xhr.onreadystatechange = function() {
50                  if(xhr.readyState == 4 && xhr.status == 200) {
51                      var table = document.getElementById("dataTable");
52                      var lines = xhr.responseText.split('\n');
53                      for(var i = 0; i < lines.length; i++) {
54                          if(lines[i].trim() === '') continue;
55                          var lineData = lines[i].split(',');
56                          var row = table.insertRow(-1);
57                          var cell1 = row.insertCell(0);
58                          var cell2 = row.insertCell(1);
59                          cell1.innerHTML = lineData[0].trim();
60                          cell2.innerHTML = lineData[1].trim();
61                      }
62                  }
63              };
64          }
65      </script>
66 </head>
67 <body onload=loadData()">
68      <p>Inicie ou pare o registro</p>
69      <button id="controlButton" onclick="control()">Iniciar registro</
            button>
70      <button onclick="clearData()">Apagar registros</button>
71      <p id="statusText"></p>
72      <h2>Dados registrados:</h2>
73      <table id="dataTable" border="1">
74          <tr>
75              <th>Data e Hora</th>
76              <th>Valor do sensor</th>
77          </tr>
78      </table>
79 </body>
80 </html>
```

```cpp
//Configurações WiFi
const char *ssid = "nome_da_rede";
const char *password = "senha_de_acesso";
const char *ap_password = "senha_do_esp32";

//Configurações NTP
const char *ntpServer = "pool.ntp.org";
const long gmtOffset_sec = -3 * 3600;

//Configurações do arquivo de dados
const char *filename = "/data.txt";

//Configurações do servidor
AsyncWebServer server(80);

//Estado de registro
bool logging = false;

//Estado do Access Point
bool apEnabled = false;

//Contador para intervalo entre leituras
unsigned long lastDataLogMillis = 0;

//Função para apagar os dados
void clearData() {
    SD.remove(filename);
}

//Função para gravar os dados no cartão SD
void logData(float pressure){
    File dataFile;
    if(SD.exists(filename)) {
        dataFile = SD.open(filename, FILE_APPEND);
    } else {
        dataFile = SD.open(filename, FILE_WRITE);
    }

    if(dataFile) {
        time_t now;
        struct tm timeinfo;
        time(&now);
        localtime_r(&now, &timeinfo);
        char datetime[20];
        strftime(datetime, sizeof(datetime), "%d-%m-$Y %H:%M:%S", &
            timeinfo);

```

```
47         //Imprime a data, hora e leitura do sensor no monitor serial
48         Serial.println(datetime);
49         Serial.print(": ");
50         Serial.println(pressure, 2);
51
52         dataFile.print(datetime);
53         dataFile.print(",");
54         dataFile.println(pressure, 2);
55         dataFile.close();
56     }
57 }
58
59 //Função para verificar se o botão está rpessionado por 5 segundos ou
      mais
60 bool isButtonPressedFor5Seconds() {
61     unsigned long startTime = millis();
62     while (digitalRead(buttonPin) == LOW) {
63         if(millis() - startTime >= 5000) {
64             return true;
65         }
66     }
67     return false;
68 }
69 void btn5sec(){
70     if(isButtonPressedFor5Seconds()) {
71         digitalWrite(ledPind, !digitalRead(ledPin));
72         if(!apEnabled) {
73             //Inicia o modo Access Point
74             WiFi.softAP(ap_ssid, ap_password);
75             Serial.print("Modo Access Point inicializado, IP: ");
76             Serial.println(WiFi.softAPIP());
77             apEnabled = true;
78         } else {
79             //Desliga o modo Access Point
80             WiFi.softAPdisconnect(true);
81             Serial.println("Modo Access Point interrompido");
82             apEnabled = false;
83         }
84     }
85 }
86
87 void setup() {
88     Serial.begin(115200);
89     pinMode(ledPin), OUTPUT);
90     pinMode(pressurePin, INPUT);
91     pinMode(buttonPin, INPUT_PULLUP);
92
```

```cpp
     //inicializa o cartão SD
     SPI.begin(SCK, MISO, MOSI, CS);
     if(!SD.begin(CS, SPI)) {
         Serial.println("Falha no cartão ou cartão ausente");
         return;
     }
     Serial.println("Cartão SD inicializado");

     //inicializa o RTC
     if(time(nullptr) == 0) {
         //inicializa o WiFi
         WiFi.begin(ssid, password);
         while(WiFi.status() != WL_CONNECTED) {
             delay(500);
             Serial.println("Buscando rede WiFi");
         }
         Serial.println("Conectado no WiFi");

         //Sincroniza o RTC com o servidor NTP
         syncRTC();
         Serial.println("Data/Hora sincronizados");

         //Encerra a conexão WiFi
         WiFi.disconnect();
         Serial.println("WiFi desconectado");
     }

     //Inicializa o servidor
     server.on("/", HTTP_GET, [](AsyncWebServerRequest *request) {
         request->send(SD, "/index.html", "text/html");
     });

     server.on("/control", HTTP_GET, [](AsyncWebServerRequest *request) {
         String action = request->getParam("action")->value();
         controlLogging(action);
         request->send(200, "text/plain", "OK");
     });

     server.on("/clearData", HTTP_GET, [](AsyncWebServerRequest *request)
         {
         clearData();
         request->send(200, "text/plain", "OK");
     });

     server.on("/clearData", HTTP_GET, [](AsyncWebServerRequest *request)
         {
         request->send(SD, "/data.txt", "text/plain");
```

```
138        });
139
140        server.on("/status", HTTP_GET, [](AsyncWebServerRequest *request) {
141            request->send(200, "text/plain", String(logging));
142        });
143
144        server.begin();
145 }
146
147 void loop(){
148        btn5sec();
149        if(logging){
150            unsigned long currentMillis = millis();
151            if(currentMillis - lastDataLogMillis >= 60000) {
152                lastDataLogMillis = currentMillis;
153                logData(readPressureSensor());
154            }
155        }
156        delay(100);
157 }
```