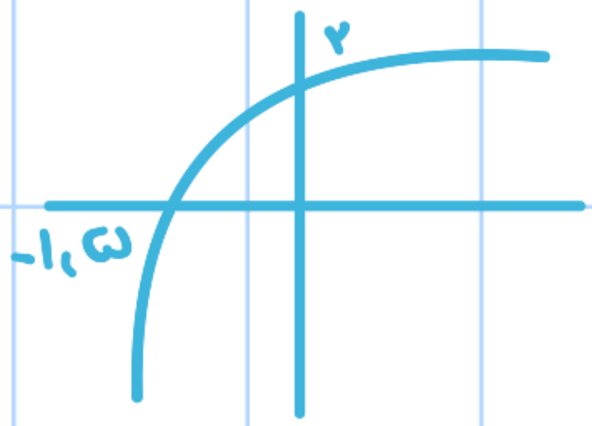
ماهرا حیرفتہ لیلی ←

$g(x)=\log_c^{ax-b}$



←۱

$۲=۱-\log_c^{-b} \Rightarrow -۱=\log_c^{-b} \Rightarrow -۱/c=b$

$-۱/c$ ↙ $b+c=-۳/۲$ ↘ $c^۲+\frac{۳}{۲}c-۱=۰$

$(c-۱/۲)(c+۲)$

$\Rightarrow c=-۲, ۱/۲$

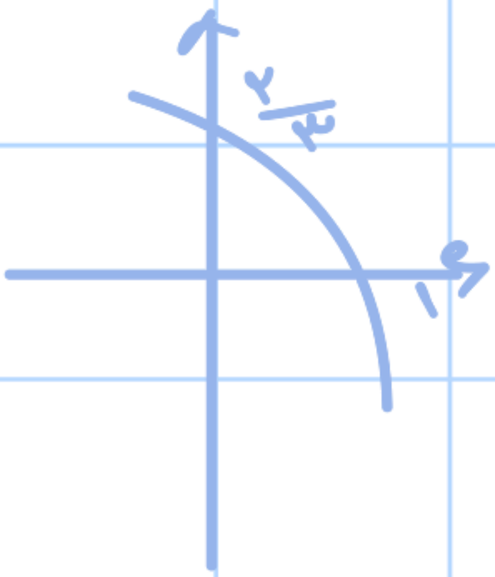
ق ق غ ↙

$\Rightarrow c=۱/۲$

$c=۱/۲, b=-۲$

$۰=۱-\log_{۱/۲}^{-۱/۳a+۲} \Rightarrow ۱=\log_{۱/۲}^{-۱/۳a+۲} \Rightarrow \frac{۱}{۲}=-\frac{۳}{۲}a+\frac{۴}{۲} \Rightarrow a=۱$

$(۱+\frac{۱}{۲})x-۲=\frac{۳}{۲}x-۲=-۳$



$y=۱+c\times۳^{a+bx}$

$\frac{۲}{۳}=۱+c\times۳^{a} \Rightarrow -۱/۳=c\times۳^{a} \Rightarrow$

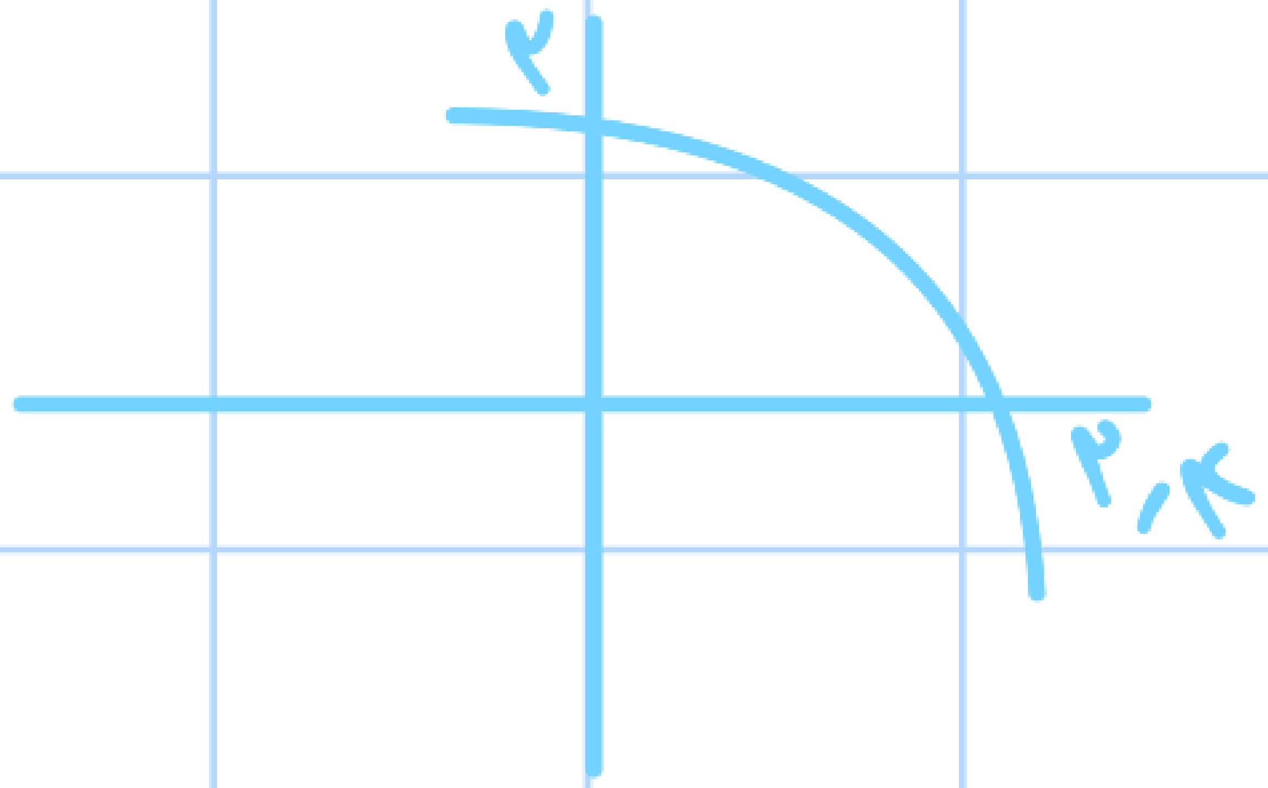
$-۳^{-۱}=c\times۳^{a}$

$۰=۱+c\times۳^{a+b} \Rightarrow -۱=c\times۳^{a+b} \Rightarrow -۱=c\times۳^{a}\times۳^{b}$ ⎫ ⎬ ⎭ ⇒

$$-۱ = -\frac{۱}{۳} \times ۳^{b} \Rightarrow b = ۱$$

$$y = ۱ + c \times ۳^{a-۱} \rightarrow y = ۱ + \frac{c \times ۳^{a}}{۳} \Rightarrow -\frac{۱}{۳} \quad =$$

$$y = ۱ - \frac{۱}{۹} = \boxed{\frac{۸}{۹}}$$



$$y = c + \log_{۵}^{ax+b}$$ ت۳

$$۲ = c + \log_{۵}^{b}$$

$$۰ = c + \log_{۵}^{۲٫۴a+b} \Rightarrow c = -\log_{۵}^{۲٫۴a+b} \Bigg\} \Rightarrow$$

$$۲ = \log_{۵}^{b} - \log_{۵}^{۲٫۴a+b} \Rightarrow ۲۵ = \frac{b}{۲٫۴a+b} \Rightarrow$$

$$۶۰a + ۲۵b = b \Rightarrow ۶۰a = -۲۴b \Rightarrow \boxed{\frac{a}{b} = \frac{-۲۴}{۶۰} = -۰٫۴}$$

$$\log_{۴}^{|x^{۲}-۲|-x} \Rightarrow x^{۲}-۲ \geq ۰ \Rightarrow x^{۲} \geq ۲ \rightarrow x \geq \sqrt{۲}$$ ت۴

$$x \leq -\sqrt{۲}$$

$$\rightarrow x^{۲} - x - ۲ > ۰ \Rightarrow (x-۲)(x+۱) > ۰$$

$$۲ \qquad -۱$$

$b=7$, $a=1 \Rightarrow 7b-a=\epsilon_{-1}=31$

$f(x)=-7+\left(\frac{1}{7}\right)^{Ax+B}$

$q_1=x^7-x$

$f^{-1}(b)=-1 \Rightarrow f(-1)=b \Rightarrow x^7+7^{b+a}=b+a=7$

$\epsilon=7+7^{b-a} \Rightarrow 7=7^{b-a} \Rightarrow b-a=1$

$-1-7+\lambda=0 \Rightarrow (1,0)$

$x^7-7=0 \Rightarrow x=\pm\sqrt{7}$

$(x+7)(x-1)<0 \Rightarrow$

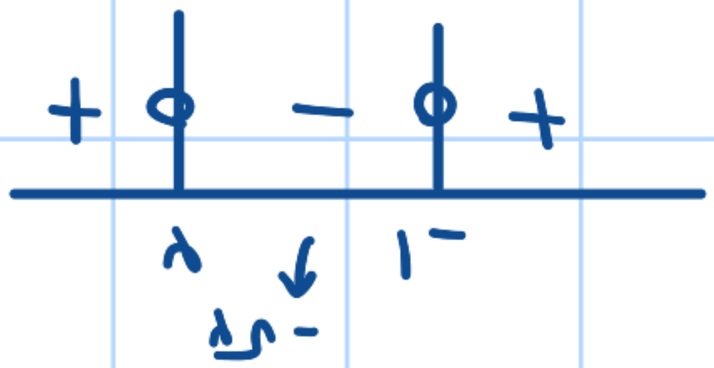
$\Rightarrow [-\sqrt{7},1)$ ②

$\Rightarrow [-\sqrt{7},1)\cup(7,+\infty)$ ①+②

$x^7-7=0 \Rightarrow x=\pm\sqrt{7}$

$x^7+x-7=0 \Rightarrow x=\frac{-1\pm\sqrt{1+8}}{2}=\frac{-1\pm3}{2}$

$x=1$, $x=-2$



$\Rightarrow x\in(-\infty,-2)\cup(1,\sqrt{2})$ ③

$①\cap②\cap③ \Rightarrow x\in(1,\sqrt{2})$

$n=1 \Rightarrow 0 = -2 + \left(\frac{1}{2}\right)^{A+B} \Rightarrow 2^1 \left(\frac{1}{2}\right)^{A+B} \Rightarrow 2^1 = 2^{-A-B} \Rightarrow$

$A+B = -1$

$n=2 \Rightarrow \cancel{x^2} \cancel{x} + 2^{-2A-B} \Rightarrow 2 = -2A-B \Rightarrow -2 = 2A+B$

$\begin{cases} 2A+B = -2 \\ -A-B = 1 \end{cases} \xrightarrow{+} A = -1 \; , \; B = 0 \Rightarrow \left(\frac{1}{2}\right)^{-x} = -2 + A$

$= q$

$\frac{1}{4}x = x \quad \times \left(\frac{1}{9}\right)^{\frac{t}{40}} \rightarrow \frac{1}{4} = \left(\frac{1}{9}\right)^{t/40}$

$\log_{\frac{1}{9}}^{\frac{1}{4}} = \frac{t}{40} \Rightarrow \frac{2}{3} \log_{\frac{2}{3}}^{\frac{1}{4}} = t/40 \rightarrow -\log_{\frac{2}{3}}^{2} = \frac{t}{40}$

$\Rightarrow \log_{\frac{3}{2}}^{2} = t/20 \rightarrow \frac{\log_3^3 + \log_3^2}{\log_3^3 - \log_3^2} = t/40$

$\log_2^5 \simeq 2,4 \rightarrow \log_5^2 \simeq \frac{10}{24}$

$\log_3^5 \simeq 1,4 \rightarrow \log_5^3 \simeq \frac{10}{14}$

$\Big\} \rightarrow \frac{\frac{10}{14} + \frac{10}{24}}{\frac{10}{14} - \frac{10}{24}} = t/40$

$\frac{140 + 240}{240 - 140} = t/40 \rightarrow t = 228 \min$

$\frac{1}{v}pH = pH \times \left(\frac{NV_a}{1000}\right)^{t/v} \rightarrow \log^{\frac{1}{v}}_{\frac{NV_a}{1000}v} = t/v \rightarrow$ ✓۱

$\log^{\frac{v}{۱}}_{\frac{1}{v}} = \frac{v}{t} \rightarrow \log^{\frac{\Delta v}{v}}_{v} = v/t \rightarrow$

$\log^{۱}_{v} - \log^{v}_{v} = v/t \rightarrow ۳\log^{۲}_{v} - ۱ = \frac{v}{t} \rightarrow ۳ \times \frac{\log^{۲}_{۳}}{\log^{v}_{۳}} - ۱ = \frac{v}{t}$

$۳ \times \frac{\frac{۱۰}{۱۶}}{\frac{۱۰}{۱۶}} - ۱ = v/t \rightarrow \frac{۱۸}{۱۶}^{۲/۱۶} - ۱ = v/t \rightarrow \frac{۱}{۸} = \frac{v}{t} \rightarrow t = ۸v$

$\log^{۳}_{v} \simeq ۱/۶ \rightarrow \log^{۲}_{۳} \simeq \frac{۱۰}{۱۶}$

$\log^{۳}_{v} \simeq ۰/۶ \rightarrow \log^{v}_{۳} = \frac{۱۰}{۶}$

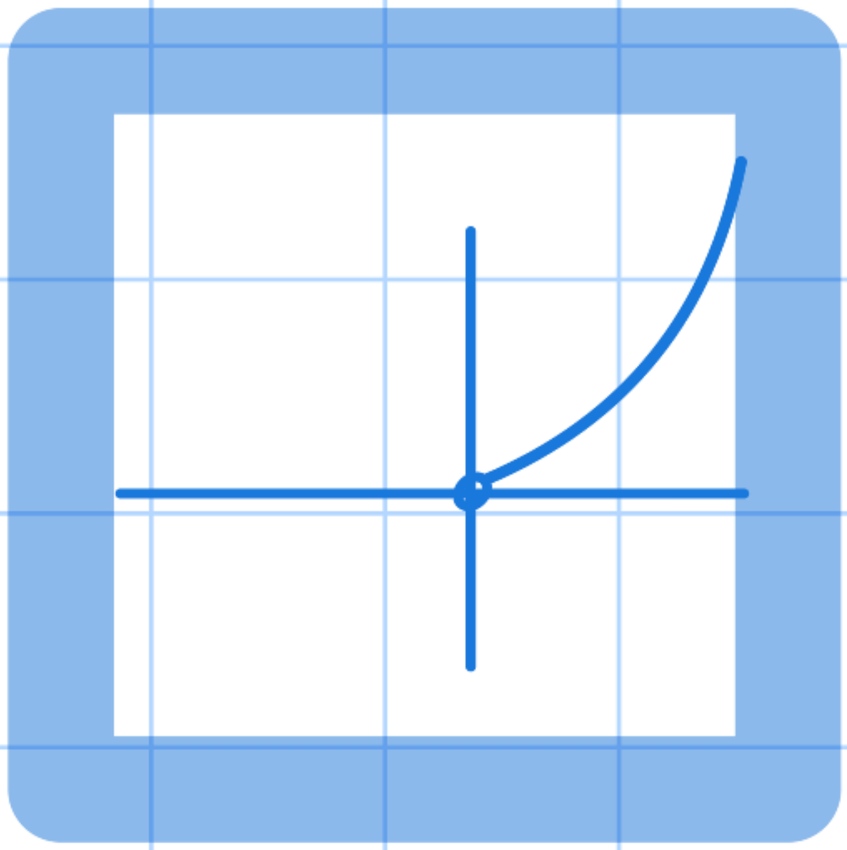
از لیتر ۱۰۰٪ $\rightarrow 100 \times \left(\frac{۲۴}{۲۵}\right)^{t} = 100 \times \left(\frac{۹۶}{۱۰۰}\right)t$ از روز اول ۹۶٪ ✓۹

$100 \times \left(\frac{۲۴}{۲۵}\right)^{b} = \frac{۱}{۳۰} \times 100 \rightarrow \log^{۳}_{\frac{۲۴}{۲۵}} b = -\frac{\log^{۳}}{۳\log^{۲} + \log^{۳} - ۲\log^{۳}}$ $\leftarrow$ بعد از $\frac{۱}{۳}$ غذا مصرف شده $\rightarrow \frac{۱}{۳} \times 100$

$= -\frac{۰/۴۸}{۳ \times ۰/۳ + ۰/۴۸ - ۲} = \frac{-۰/۴۸}{-۰/۵۲} = ۲۴$

$9^{\log_w n}$ ← $n^{\log_w 9}$ ، n^2

$n > 0$



$\log n^2$ → هر تونه + بیگ هر - دی صفر → $2\log n$