

$$y = 1 - \log_c(ax - b)$$

$$0 = 1 - \log_c(-1/a \cdot a - b)$$

$$\boxed{-1/a \cdot a - b = c} \quad (1)$$

$$\Rightarrow 1 = \log_c(-1/a \cdot a - b)$$

$$y = 1 - \log_c -b$$

$$\Rightarrow -1 = \log_c -b \Rightarrow \boxed{-b = c^{-1}}$$

$$\boxed{b + c = -\frac{1}{c}}$$

$$b + c = -\frac{1}{c} \Rightarrow \cancel{b} + c = -\frac{1}{c} \Rightarrow c = -\frac{1}{c} \Rightarrow c^2 = -1$$

$$1/a \cdot a = -\frac{1}{c} \Rightarrow \boxed{a = 1}$$

$$-rc = rc - r \Rightarrow \cancel{rc} = \cancel{rc} - r \Rightarrow -r = -r$$

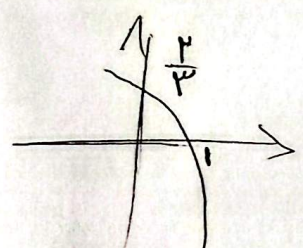
$$\left. \begin{aligned} &\rightarrow x_1 = \frac{1}{r} \checkmark \\ &\rightarrow -r = x_1 \cdot \% \end{aligned} \right\}$$

$$\frac{C}{C \neq 1} \Rightarrow \boxed{\frac{1}{r}}$$

$$\boxed{C = \frac{1}{r}}$$

$$\boxed{B = -r}$$

$$\left(1 + \frac{1}{r}\right)^{-r} \Rightarrow \left(\frac{r}{r}\right)^{-r} = \boxed{\frac{e}{a}}$$



$$f(0) = 1 + Cx^r^{a+b} \quad ? f(-1) \text{ like } f(a) = 1 + Cx^r^{a+b} \quad (r)$$

$$\Rightarrow \boxed{\frac{r}{r} = 1 + Cx^r^a} \Rightarrow Cx^r^a = -\frac{1}{r}$$

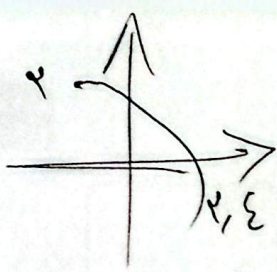
$$f(x) = 1 + Cx^r^a + b$$

$$0 = 1 + \left(-\frac{1}{r}\right) x^r^b \Rightarrow \boxed{0 = 1 + Cx^r^a x^r^b}$$

$$\Rightarrow r^{b-1} = -1 \Rightarrow r^{b-1} = 1 \Rightarrow b-1 = 0 \Rightarrow \boxed{b = 1}$$

$$f(-1) = 1 + Cx^r^a - 1 \Rightarrow \boxed{Cx^r^a}$$

$$\Rightarrow 1 + \frac{1}{a} = \boxed{\frac{10}{a}}$$



$$y = C + \log_{\delta} (ax + b)^r$$

$$y = C + \log_{\delta} (r, \varepsilon a + b)$$

$$\Rightarrow \frac{-C}{\delta} = r, \varepsilon a + b$$

$$y = C + \log_{\delta} b$$

$$\Rightarrow \frac{y-C}{\delta} = b$$

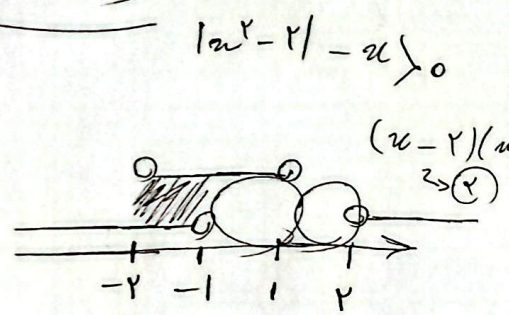
$$\delta^{-C} = r, \varepsilon a + \delta^{y-C}$$

$$\delta^{y-C} \times \delta^{-C} \Rightarrow 1 = r\delta + \frac{r, \varepsilon a}{\delta^{-C}}$$

$$-r\varepsilon = \frac{r, \varepsilon a}{\delta^{-C}} \Rightarrow \frac{-r\varepsilon}{\delta^r} = \frac{r, \varepsilon a}{\delta^y \times \delta^{-C}} \Rightarrow \frac{-r\varepsilon}{r\delta} = \frac{r, \varepsilon a}{b}$$

$$\frac{-1}{r\delta} = \frac{a}{b}$$

$$f(x) = \log_{\varepsilon} (|x^r - r| - x) \quad ? \quad \varepsilon^{-x} = b \quad (E)$$



$$|x^r - r| > x \Rightarrow x^r - r > x \rightarrow x^r - x - r > 0$$

$$\frac{-1}{\delta} < \frac{r}{\delta} < \frac{-1}{\delta} \Rightarrow \frac{-1}{\delta} < \frac{r}{\delta} < \frac{-1}{\delta}$$

$$\Rightarrow \frac{-1}{\delta} < \frac{r}{\delta} < \frac{-1}{\delta} \Rightarrow \frac{-1}{\delta} < \frac{r}{\delta} < \frac{-1}{\delta}$$

$$D_f = \mathbb{R} - [1, r] - \left\{ -1, -\frac{1}{\delta} \right\}$$

Let $g(x) = -x^r - rx + 1$ and $f(x) = r + r^{b-ax}$ (S)

$$g(1) = f(1) \Rightarrow -1 = r + 1 = r + r^{b-a} \Rightarrow r^{b-a} = -1 - r$$

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

$$\left. \begin{matrix} b-a = 1 \\ b+a = r \end{matrix} \right\} \begin{matrix} r^b = \varepsilon \\ b = r \\ a = 1 \end{matrix}$$

$$r^{b-a} = 1 \Rightarrow r^1 = 1 \Rightarrow r = 1$$

$$r^{b+a} = r^r = \varepsilon \Rightarrow b+a = r$$

سوال ۱۳

فرض کنید $f(x) = -x + \left(\frac{1}{x}\right)^{A+B}$ (۴)

$f(1) = -1 + \left(\frac{1}{1}\right)^{A+B} = 1$ $\left(\frac{1}{1}\right)^{A+B} = 2 \rightarrow 1^{-(A+B)} = 2$

$f(2) = -2 + \left(\frac{1}{2}\right)^{2A+B} = 2$ $\Rightarrow \left(\frac{1}{2}\right)^{2A+B} = 4 \rightarrow 2^{-(2A+B)} = 4$

$$\begin{cases} -1(A+B) = 1 \Rightarrow -A-B=1 \\ -1(2A+B) = 2 \Rightarrow -2A-B=2 \end{cases} \Rightarrow -A=1 \Rightarrow \begin{cases} A=-1 \\ B=0 \end{cases}$$

$f(x) = -x + \left(\frac{1}{x}\right)^{-1(3)} \Rightarrow 9$

بعضی موجوده که در ساعت $\frac{1}{9}$ از یک کم می‌شه و سن از x دقیقه $\frac{1}{9}$ (۵)

از حجم غیر صاف ماند که a حفره؟ سن ۱۵ و ۱۶ ساعت

$P = P_0 e^{t/a}$ $\frac{1}{9} = 1 \times e^{t/a} \Rightarrow t = 14,125 \times 6$

(۹.۵۷)

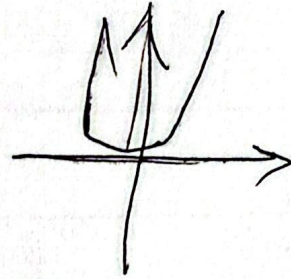
$P = P_0 e^{t/a} \Rightarrow \frac{1}{9} = e^{t/12.5}$

(۱۲)

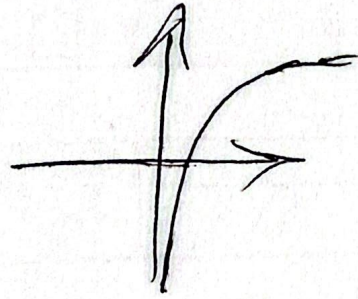
9) فرضی ۱.۰۰ لیٹر محلول صحت هر روز ۱ لیٹر محلول بیرون طارم و به جایش آب خالص
 اضافه می کنیم. پس از چند روز غلظت آن $\frac{1}{۳}$ غلظت اولیه صند؟

الف) $y = 9 \log_3 x$

$\Rightarrow x^2$



ب) $\log x^2$



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