نام و نام خانوادگی ... پاسخنامه تشریحی تکلیف شماره ۲۵ ... کلاس ...

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$(0,2) \to 2 = 1 - \log_c^{-b} \to -b = \frac{1}{c}$ ①

$(-1,5, 0) \to \log_c^{-1,5a-b} = 1 \Rightarrow -1,5a = b + c \Rightarrow -1,5a = -1,5$

$\Rightarrow a = 1$ ④ ① $\to \frac{-1}{c} + c = -1,5 \Rightarrow c^2 + 1,5c - 1 = 0 \to c = -2$ ✗

$\Rightarrow b = \frac{-1}{0,5} = -2$ ③ ②③④ $\to (a+c)b = 1,5 \times (-2) = -3$ ✓ $\to c = 0,5$ ✓ ②

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$(0, \frac{2}{3}) \to \frac{2}{3} = 1 + c \times 3^a \to c \times 3^a = \frac{2}{3} - 1$ ①

$(1,0) \to 0 = 1 + c \times 3^{a+b} \to c \times 3^{a+b} = -1$ ②

$\to \frac{②}{①} \Rightarrow \frac{-1}{\frac{-1}{3}} = 3^b = 3 \Rightarrow b = 1$ ✓

اولویت با فدریبل

$f(-1) = 1 + c \times 3^{a-1} = \frac{2}{3} \times \frac{1}{3} = \frac{2}{9}$ ~~۲~~ $1 + (\frac{-1}{3} \times \frac{1}{3}) = \frac{8}{9}$

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$(0,2) \to c + \log_5^b = 2$ ①, $(2,14, 0) \to c + \log_5^{2,14a+b}$ ②

① - ② $\to 2 = \log_5^{\frac{b}{b+2,14a}} \Rightarrow 25 = \frac{b}{b+2,14a} \Rightarrow 50a = -24b$ ③

③ $\to \frac{a}{b} = \frac{-24}{50} = \frac{-4}{10} = \frac{-2}{5}$ ✓

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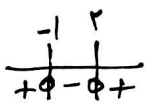
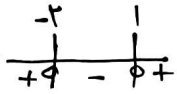
$\log_4^{(|x^2-2|-x)} \Rightarrow |x^2-2| > x \to x^2 - 2 > x \Rightarrow x^2 - x - 2 > 0$ ①

$\to x^2 - 2 < -x \Rightarrow x^2 + x - 2 < 0$ ②

① $\to$ 

, ② $\to$ 

①∪② $\to (-\infty, 1) \cup (2, +\infty)$ ✓

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$x = 1$ طول $\Rightarrow f(1) = g(1) \Rightarrow 2 + 2^{b-a} = 4 \Rightarrow 2^{b-a} = 2 \Rightarrow b - a = 1$ ①

$f(-1) = 10 \Rightarrow 10 = 2 + 2^{b+a} \Rightarrow b + a = 3$ ②

① + ② $\to 2b = 4 \Rightarrow b = 2$ ✓, $2a = 2 \Rightarrow a = 1$ ✓

$2b - a = 4 - 1 = 3$ ✓

۶ (۲)

$x=1$ به ازای $\Rightarrow y=0 \Rightarrow 0=-2+\left(\frac{1}{2}\right)^{A+B} \Rightarrow 2=\left(\frac{1}{2}\right)^{A+B} \Rightarrow A+B=-1$ (1)

$x=2$ به ازای $\Rightarrow y=2 \Rightarrow 2=-2+\left(\frac{1}{2}\right)^{2A+B} \Rightarrow 2A+B=-2$ (2)

$(1),(2) \Rightarrow A=-1,\ B=0 \Rightarrow f(x)=-2+2^{x}$

$f(3)=-2+2^{3}=\boxed{6}$ ✓

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۷ (۲)

$f(t)=A\left(\frac{8}{9}\right)^{t}=\frac{1}{6}A \xrightarrow{\log_5} t\log_5\frac{8}{9}=-\log_5 6$ (1)

$\log_5\frac{8}{9}=\log_5 8-\log_5 9=3\frac{1}{\log_2 5}-2\frac{1}{\log_3 5}=\frac{5}{4}-\frac{10}{7}=\frac{-5}{28}$ (2)

$\log_5 6=\frac{1}{\log_2 5}+\frac{1}{\log_3 5}=\frac{1}{2/4}+\frac{1}{1/4}=\frac{95}{84}$ (3)

$(1),(2),(3) \Rightarrow t\left(\frac{-5}{28}\right)=-\frac{95}{84} \Rightarrow t=\frac{19}{3}h \Rightarrow 6\times 60+20=\boxed{380\ min}$ ✓

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۸ (۲)

$f(t)=A\left(\frac{7}{8}\right)^{t}=\frac{1}{7}A \Rightarrow \frac{1}{7}=\left(\frac{7}{8}\right)^{t} \xrightarrow{\log_3} \log_3 7^{-1}=\log_3\left(\frac{7}{8}\right)^{t}$

$\log_3 7=\frac{1}{0/6}=\frac{5}{3}$, $\log_3 8=\frac{3}{1/6}=\frac{15}{8}$

$\Rightarrow \frac{-5}{3}=t\left(\frac{5}{3}-\frac{15}{8}\right) \Rightarrow t=\frac{\frac{-5}{3}}{\frac{-5}{24}}=8 \Rightarrow 8\times 7=\boxed{56\ \text{روز}}$ ✓

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۹ (۲)

$\left(\frac{96}{100}\right)^{t}=\frac{1}{3} \xrightarrow{\log_{10}} \log\left(\frac{96}{100}\right)^{t}=\log 3^{-1} \Rightarrow t(\log 96-\log 100)=-0/48$

$\log_{10} 96=5\log 2+\log 3=1/98$

$t(-0/02)=-0/48 \Rightarrow t=\boxed{24}$ ✓

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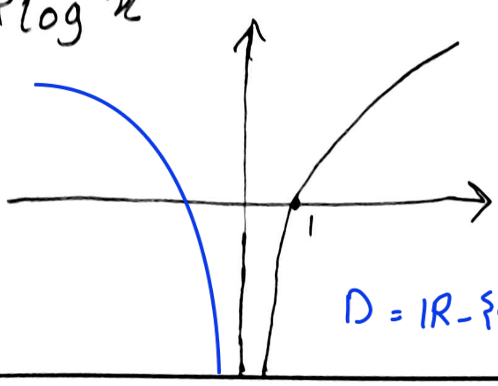
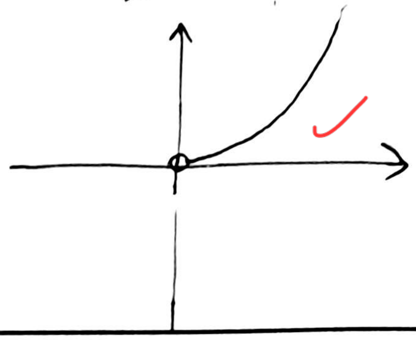
۱۰ (۱٫۲۵)

ب) $2\log x$



$D=\mathbb{R}-\{0\}$

الف) $x^{\log_3 9}=x^{2}$



دامنه رو باید قبل از تغییر ضابطه حساب کنی!