نام و نام خانوادگی ...[illegible]... پاسخنامه تشریحی تکلیف شماره ...۲۵... کلاس ...یازدهم ریاضی...

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$(0,2)\ (-\frac{3}{2},0)$ $\quad (a+c)b=-3 \quad b+c=-\frac{3}{2} \quad y=1-\log_c^{(ax-b)}$

$y=1-\log_c^{(ax-b)} \xrightarrow[(0,2)]{(-\frac{3}{2},0)} 1-\log_c^{-b}=2 \to \log_c^{-b}=-1 \to c^{-1}=-b \to \frac{1}{c}=b$

$y=1-\log_c^{-\frac{3}{2}a-b}=0 \to \log_c^{-\frac{3}{2}a-b}=1 \to c+b=-\frac{3}{2}a \to a=1$

$-\frac{1}{c}+c=\frac{c^2-1}{c}=-\frac{3}{2} \to 2c^2-2=-3c \to c=\frac{1}{2}$ قق , $b=-2$ غق

۲

$(0,\frac{2}{3}),(1,0) \quad f(x)=1+c\times3^{a+bx} \xrightarrow{(0,\frac{2}{3})} 1+3^a c=\frac{2}{3} \to c\times3^a=-3^{-1}$

$\to c=-1, a=-1 \quad \xrightarrow{(1,0)} 1-1\times3^{-1+b}=0 \quad 1=3^{-1+b} \to -1+x=0 \to b=1$

$\to f(x)=1-3^{-1+x} \to f(-1)=1-\underbrace{3^{-2}}_{\frac{1}{9}}=\frac{8}{9}$

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$(0,2)(2.4,0) \xrightarrow[(2.4,0)]{(0,2)} 2=c+\log_5^b\ ,\ -c=\log_5^{2.4a+b} \quad y=c+\log_5^{ax+b}$

$\log_5^b-\log_5^{2.4a+b}=2 \to \log_5^{\frac{b}{2.4a+b}}=2 \quad \frac{b}{2.4a+b}=25$

$\to 24b=-60a \to \frac{a}{b}=-0.4$

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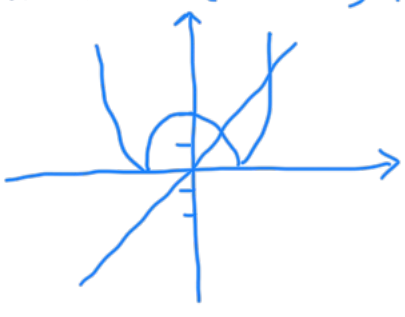
$|x^2-2|-x\geq0 \to |x^2-2|\geq x \to |x^2-2|=x$

$(x-2)(x+1)=0 \to x=2,-1$

قق غق



$\to x^2-2+x=0 \quad (x+2)(x-1)=0$

$\to x=-2,1$

غق قق

$D_f=(-\infty,1)\cup(2,+\infty)$

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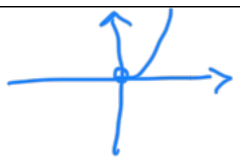
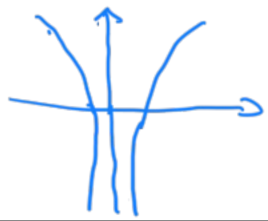
$g(1)=f(1) \to -1-3+8=4=2+2^{b-a} \to 2=2^{b-a} \to b-a=1$

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

$2b=4 \to b=2, a=1$

$\to 2b-a=3$

$x=1 \to 0 = -2 + \left(\frac{1}{2}\right)^{A+B} \to 2 = 2^{-A-B} \to A+B = -1$ $x=2 \to 2 = -2 + 2^{-2A-B} \to -2 = 2A+B$ $\begin{cases} (A+B=-1)\times -1 \\ 2A+B=-2 \end{cases}$ $A=-1 , B=0 \to f(x) = -2+2^{x} \to f(3) = 6$	۶
$m(t) = x_0 \times \left(\frac{8}{9}\right)^{\frac{t}{40}} = \frac{1}{6}x \to \left(\frac{8}{9}\right)^{\frac{t}{40}} = \frac{1}{6} \to \log_{\frac{8}{9}}^{\frac{1}{6}} = \frac{t}{40}$ $\to \frac{t}{40} = \frac{\log_5^{\frac{1}{6}}}{\log_5^{\frac{8}{9}}} = \frac{\cancel{\log_5^{1}}^{0} - \log_5^{6}}{\log_5^{8} - \log_5^{9}} = \frac{0 - \log_5^{2} + \log_5^{3}}{3\log_5^{2} - 2\log_5^{3}} = \frac{-\frac{5}{12} - \frac{5}{7}}{3\times\frac{5}{12} - 2\times 5} = \frac{19}{3}$ $\log_5^{2} = \frac{1}{\log_2^{5}} = \frac{5}{12} , \log_5^{3} = \frac{1}{\log_3^{5}} = \frac{5}{7}$ $\to t = 380\,min$	۷
$m(t) = \cancel{x} \times \left(\frac{7}{8}\right)^{\frac{t}{7}} = \frac{1}{7}\cancel{x} \to \log_{\frac{7}{8}}^{\frac{1}{7}} = \frac{t}{7} = \frac{\log_3^{\frac{1}{7}}}{\log_3^{\frac{7}{8}}}$ $= \frac{\log_3^{1} - \log_3^{7}}{\log_3^{7} - \log_3^{8}} = \frac{-\frac{5}{3}}{\frac{5}{3} - \frac{15}{8}} = 8$ $\log_3^{7} = \frac{1}{\log_7^{3}} = \frac{5}{3}$ $\log_3^{2} = \frac{1}{\log_2^{3}} = \frac{5}{8}$ $t = 56$ روز	۸
$m(t) = \cancel{x} \times \left(\frac{96}{100}\right)^{t} = \frac{1}{3}\cancel{x} \to \log_{\frac{96}{100}}^{\frac{1}{3}} = t \to \frac{\log^{\frac{1}{3}}}{\log^{\frac{96}{100}}}$ $= \frac{-\log^{3}}{\log^{96} - \log^{100}} = \frac{-\log^{3}}{5\log^{2} + \log^{3} - 2} = \frac{-0.48}{1.5 + 0.48 - 2} = \frac{-0.48}{-0.02} = 24$	۹
$y = 9^{\log_3^{x}} = x^{2}$ $D_f = (0, +\infty)$  $y = \log^{x^{2}} = 2\log_{10}^{x}$ $D_f = \mathbb{R} - \{0\}$  $y = \log_{10}^{x}$  $y = 2\log_{10}^{x}$	۱۰