نام و نام خانوادگی ..آرمیتا محمدی.. پاسخنامه تشریحی تکلیف شماره ۲۵ کلاس ..یازدهم ریاضی..

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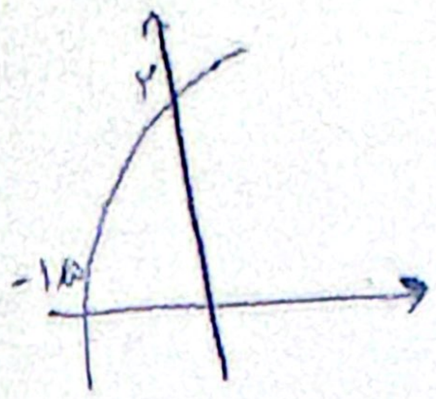

$b+c=-\frac{1}{2}$ → $c-\frac{1}{c}=-\frac{3}{2}$

$x=-1/5$ → $1-\frac{1}{5}c=0$ ✓ $\quad c=-1/5a-b$

$x=0$ → $1-c=2$ ✓ $\quad -1=\frac{1}{c}-b$

$c^2+\frac{3}{2}c-1=0$ → $2c^2+3c-2=0$ → $c=-2$ ✗ , $c=\frac{1}{2}$ ✓

$c>0$ ✓ $\quad c=\frac{1}{2}$

$c-\frac{1}{c}=-1/5a$

$\frac{1}{2}-2=-\frac{3}{2}a$ ✓ $\quad a=1$ ✓

$b=-2$ ✓

$(a+c)b \rightarrow (1+\frac{1}{2})\times -2=-3$ ✓

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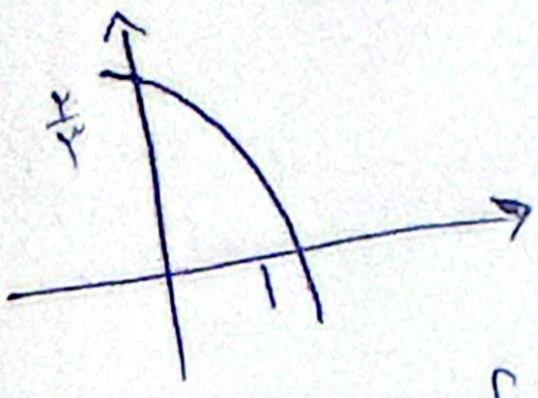
$f(x)=1+c\times 3^{ax+b}$



$f(1)=1+c\times 3^{a+b}=0$ → $c\times 3^{a+b}=-1$

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

$3^b=3$ → $b=1$ ✓

$f(-1)=1+c\times 3^{a-b}=1+\frac{c\times 3^a}{3^b}=1-\frac{1}{9}=\frac{8}{9}$ ✓

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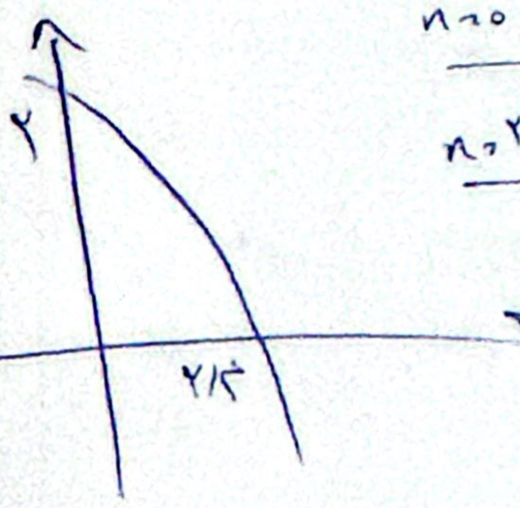

$x=0$ → $2=c+1^b$

$x=2/4$ → $0=c+1^{2/4a+b}$

→ $2=1^b-1^{2/4a+b}$

$2=1^b$ ✓ $\quad 1^{2/4a+b}=0$ ✓

→ $2a=\frac{b}{2/4a+b}$

$b=2ab+9a$ → $-24b=9a$ → $\frac{a}{b}=-\frac{24}{9}=-\frac{2}{3}=-0.6$

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$f(x)=1^{(|x^2-2|-x)}$

D_f ↓

$x\neq 0$ ✓

$x\neq 1$ ✓

$|x^2-2|-x>0$

$x^2-x-2>0$

$(x-2)(x+1)>0$

	-1		2	
$x-2$	$-$	$-$	0	$+$
$x+1$	$-$	0	$+$	$+$
$(x-2)(x+1)$	$+$	0	$-$	0	$+$

$-x^2+x+2>0$

$x^2-x-2<0$

	-1		2	
x^2-x-2	$+$	0	$-$	0	$+$

① $x\geq 2$, $x\leq -1$ → $(-\infty,-1]\cup[2,+\infty)$ ✓

② $-1<x<2$ → $(-1,1)\cup(1,2)$ ✓

$D_f=\mathbb{R}-[1,2]$ ✓

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$g(x)=-x^2-3x+8$

$g(1)=4$

$f(1)=4$

$2+2^{b-a}=4$

$2^{b-a}=2$ → $b-a=1$

$f^{-1}(10)=-1$

$f(-1)=10$ → $2+2^{b+a}=10$ → $b+a=3$

$b=2$, $a=1$ → $2b-a=3$ ✓

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$f(x) = -2 + (\frac{1}{2})^{Ax+B}$

$x=1 \to y=0$

$x=2 \to y=2$

$f(1)=0 \to 0 = -2+(\frac{1}{2})^{A+B}$

$A+B=-1$

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

$(\frac{1}{2})^{2A+B} = 2^{-2}$

$-2A-B=2$

$A+B=-1$

$-A=1$

$A=-1$

$B=0$

$f(x) = -2+(\frac{1}{2})^{-x}$

$f(3) = -2+8 = 6$ ✓

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$M \times (\frac{8}{9})^t = \frac{1}{4}M$

$(\frac{8}{9})^t = \frac{1}{4}$

$t \log \frac{8}{9} = \log \frac{1}{4}$

$t = \frac{\log \frac{1}{4}}{\log \frac{8}{9}} = \frac{-\log 4}{\log 8 - \log 9} = \frac{\log 4}{\log 9 - \log 8} = \frac{\frac{1}{2}\log 4}{\log 9 - \log 8} = \frac{\log 2}{\log 3^2 - \log 2^3} = \frac{\log 2}{2\log 3 - 3\log 2}$

$= \frac{\frac{1}{3}}{\frac{2}{3} - \frac{3}{4}} = \frac{\frac{1}{3}}{\frac{8-9}{12}} = \frac{4}{-1} = 4$ ساعت

$\frac{9}{15} \times 60 = 36$ min ✓

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$M \times (\frac{7}{8})^t = \frac{1}{7}M$

$(\frac{7}{8})^t = \frac{1}{7}$

$t \log \frac{7}{8} = \log \frac{1}{7}$

$t = \frac{\log \frac{1}{7}}{\log \frac{7}{8}} = \frac{-\log 7}{\log 7 - \log 8} = \frac{\log 7}{3\log 2 - \log 7} = \frac{\frac{3}{2}}{3 - \frac{3}{2}} = \frac{\frac{3}{2}}{\frac{3}{4}} = 4$ سال

$4 \times 7 = 28$ ✓

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$M \times (\frac{94}{100})^t = \frac{1}{2}M$

$t \log \frac{94}{100} = \log \frac{1}{2}$

$t = \frac{\log \frac{1}{2}}{\log \frac{94}{100}} = \frac{\log 2}{\log 100 - \log 94} = \frac{0.301}{2 - 1.973} = \frac{0.301}{0.027} = 11$ ✓

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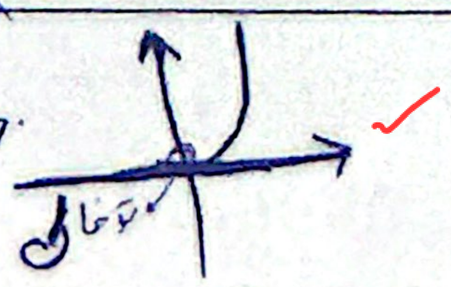
الف) $y = \log_3^n x \xrightarrow{n>0} y = x^3, n>0$



ب) $y = \log x^2 - 2\log|x|$

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