۱۹,۷۵

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

پاسخ	نمره	شماره
$y=1-\log_c^{(ax-b)} \longrightarrow 1+\log_c^{(-1.5a-b)}=1$ $\longrightarrow c=-1.5a-b \longrightarrow b+c=-\frac{3}{2}=-\frac{3}{2}a \longrightarrow a=1$ $\longrightarrow 1+\log_c^{(-b)}=2-1 \longrightarrow \frac{1}{c}=-b \longrightarrow bc=-1$ $\longrightarrow c=\frac{1}{2}$, $b=-2 \longrightarrow (\frac{3}{2})(-2)=-3$	۲	۱
① $1+c\times 3^{a}=\frac{2}{3}-\frac{1}{3}$ $1+c\times 3^{a+b}=0-1$) تقسیم $\longrightarrow 3^{b}=3 \longrightarrow b=1$ $f(x)=1+c\times 3^{a+x} \longrightarrow f(-1)=1+(c\times 3^{a-1})$ دو طرف ① [illegible] ضرب در $\frac{1}{3}$ است $\longrightarrow c\times 3^{a-1}=-\frac{1}{3}\times\frac{1}{3}=-\frac{1}{9} \longrightarrow f(-1)=1-\frac{1}{9}$ $=\frac{8}{9}$	۲	۲
$c+\log_5^{(b)}=2$ $c+\log_5^{(2.4a+b)}=0$) اختلاف $\log_5^{b}-\log_5^{(2.4a+b)}=2$ $25=\frac{b}{2.4a+b} \longrightarrow 60a+25b=b \longrightarrow \frac{a}{b}=-0.4$ ($-24b$) $=-\frac{2}{5}$	۲	۳
$\lvert x^2-2\rvert-x>0$ < $x\geq\sqrt{2}$, $x\leq-\sqrt{2} \longrightarrow x^2-x-2 \longrightarrow (x-2)(x+1)$; $\sqrt{2}>x>-\sqrt{2} \longrightarrow -x^2-x+2 \longrightarrow -(x+2)(x-1)$ الف $\longrightarrow$ (-1, 2 ; $+ - +$) $\longrightarrow (-\infty,-\sqrt{2}] \cup (2,+\infty)$ ب $\longrightarrow$ (-2, 1 ; $- + -$) $\longrightarrow [-\sqrt{2},1)$ $\longrightarrow$ اجتماع $\longrightarrow D_f=(-\infty,1)\cup(2,+\infty)$	۲	۴
$f(x)=2+2^{b-ax}$ $g(x)=-x^2-2x+8$ $(1,\alpha) \longrightarrow -1-3+8=4=\alpha$ $2+2^{b-a}=4 \; 2 \longrightarrow b-a=1$ $f(-1)=10 \longrightarrow 2+2^{b+a}=10 \; 8 \longrightarrow b+a=3$ $\longrightarrow b=2$, $a=1 \longrightarrow 2b-a=4-1=3$	۲	۵

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

$y = x^2 - x \longrightarrow (1,0)\ ,\ (2,2)$

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

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

$\Big) \quad A = -1,\ B = 0$

$f(3) = -2 + \left(\frac{1}{2}\right)^{-3} = -2 + 8 = 6$ ✓

۶ (۲)

$m_0 \left(\frac{8}{9}\right)^{\frac{t}{15}} \longrightarrow \left(\frac{8}{9}\right)^{t} = \frac{1}{4} \longrightarrow t = \log_{\frac{8}{9}}^{\frac{1}{4}}$

$\longrightarrow t = \frac{\log 1 - \log 4}{\log 8 - \log 9} = \frac{-\log 4}{3\log 2 - 2\log 3} = \frac{-\frac{1}{0.6}}{\frac{3}{0.3} - \frac{2}{0.4}} = \frac{-\frac{1}{0.6}}{\frac{3}{0.3} - \frac{3}{0.6}}$

$= \frac{-190}{190} = \frac{19}{2}\ h$ ✓ $\times 40 = 380\ min$

۷ (۱٫۷۵)

$m_0 \left(\frac{7}{8}\right)^{\frac{t}{21}} \longrightarrow \left(\frac{7}{8}\right)^{t} = \frac{1}{7} \longrightarrow t = \log_{\frac{7}{8}}^{\frac{1}{7}}$

$\longrightarrow \frac{\log 1 - \log 7}{\log 7 - \log 8} = \frac{-\frac{10}{3}}{\frac{10}{3} - \frac{3}{1.3}} = \frac{\frac{-10}{3}}{\frac{10-9}{3}} = \frac{-10}{-1}$

$\longrightarrow 10$ هفته $\longrightarrow 10 \times 7 = 70$ روز ✓

۸ (۲)

$L_0 \left(\frac{24}{25}\right)^{\frac{t}{21}} \longrightarrow \left(\frac{24}{25}\right)^{t} = \frac{1}{2} \longrightarrow t = \log_{\frac{24}{25}}^{\frac{1}{2}}$

$\longrightarrow \frac{\log 1 - \log 2}{\log 24 - \log 25} = \frac{-0.48}{3\log 2 + \log 3 - 2\log 5} = \frac{-0.48}{-0.02}$

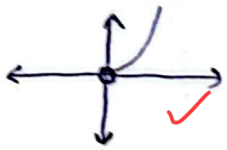
$= 24$ روز ✓

۹ (۲)

الف) $y = 9^{\log_3 x}$

① $x > 0$

② $9^{\log_3 x} = x^{\log_3 9} = x^2$

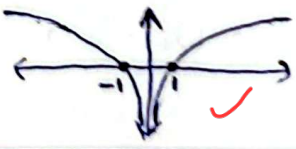


✓

ب) $\log x^2$

① $x^2 > 0 \longrightarrow x = \mathbb{R} - \{0\}$

② $\log x^2 = 2\log x$



✓

۱۰ (۲)