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

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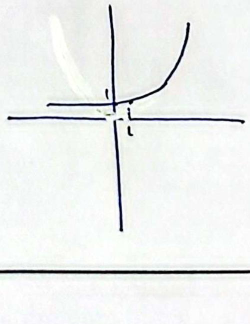
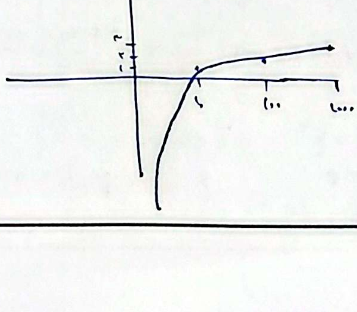
جایگذاری $\xrightarrow{x=1} -2+(\frac{1}{2})^{A+B}=0 \to (\frac{1}{2})^{A+B}=2$ $\xrightarrow{x=2} -2+(\frac{1}{2})^{2A+B}=2 \to (\frac{1}{2})^{2A+B}=4$ $\begin{cases} A+B=-2 \\ 2A+B=-2 \end{cases}$ $A=-1$, $B=0$ $f(3)=-2+(\frac{1}{2})^{-3}=6$	۶
$f(t)=A_0(\frac{8}{9})^{\frac{t}{40}}$ / $A_t=\frac{8}{9}A_0 \to A_0\times(\frac{8}{9})^{\frac{t}{40}}=\frac{A_0}{6} \to (\frac{8}{9})^{\frac{t}{40}}=\frac{1}{6}$ لگاریتم $\frac{t}{40}=\frac{\log\frac{1}{6}}{\log\frac{8}{9}}=\frac{-(\log 2+\log 3)}{3\log 2-2\log 3} \xrightarrow{\div \log 2} -1-\frac{\log 3}{\log 2}\times\frac{1}{3-2\log_2 3}$ $\frac{\log\frac{9}{2}}{\log\frac{5}{3}}=\frac{0.24}{1.24} \to \log_2 3=\frac{12}{7}$ $\frac{t}{40} \to \frac{-1-\frac{12}{7}}{-\frac{24}{7}+3}=\frac{19}{7}\times\frac{7}{3}=\frac{19}{3}=\frac{t}{40}$ $t=40\times 19$ $t=$ [illegible]	۷
$\frac{100}{100}-\frac{12.5}{100}=\frac{87.5}{100}=\frac{7}{8}$ $A(t)=A_0(\frac{7}{8})^{\frac{t}{7}}=\frac{1}{7}A_0$ $(\frac{7}{8})^{\frac{t}{7}}=\frac{1}{7}$ $\to \log_3 (\frac{7}{8})^{\frac{t}{7}}=\log_3 \frac{1}{7} \to \frac{t}{7}\log_3 \frac{7}{8}=\log_3 \frac{1}{7} \to \frac{t}{7}(\log_3 7-\log_3 8)=\log_3 \frac{1}{7}=-\log_3 7$ ($3\log_3 2$) $\frac{t}{7}(\frac{5}{3}-3\times\frac{5}{8})=-\frac{5}{3}$ $\frac{t}{7}(-\frac{5}{24})=-\frac{5}{3}$ $t=56$	۸
$a_n=a\cdot(\frac{100}{100}-\frac{4}{100})^n=\frac{1}{2}a \to (\frac{96}{100})^n=\frac{1}{2}$ $\log(\frac{96}{100})^n=\log\frac{1}{2} \to n(\log 96-\log 100)=\log 1-\log 2 \to n(\log 2^5\times 3-2)=-\log 2$ $n(5\log 2+\log 3-2)=-0.3 \to n=24$ $(0.48-2)$	۹
الف) $9^{\log_3 x} \to x^{\log_3 9} = x^2$  ب) $\log x^2 \Rightarrow 2\log x$ x: 10, 100, 1000 — y: 2, 4, 6 	۱۰