نام و نام خانوادگی ..... پاسخنامه تشریحی تکلیف شماره 25 کلاس یازدهم پسر B

۱
$y = 1 - \log_c^{(ax-b)} \longrightarrow (0,2)/(-1/5,0) \rightarrow 1 - \log_c^{-b} = 2 \longrightarrow$
$\frac{1}{c} = -b \;,\; b + c = -\frac{3}{2} \rightarrow \boxed{c=-2, b=\frac{1}{2}} \rightarrow 1 - \log_{-2}^{ax-\frac{1}{2}}$
$\longrightarrow 1 - \log_{-2}^{-1/5a-\frac{1}{2}} = 0 \longrightarrow -2 = -1/5a - 0/5 \rightarrow \boxed{a=1}$
$(a+c)b = \boxed{-\frac{1}{2}}$

۲
$y = 1 + c\alpha 3^{a+bx} \longrightarrow (0,\frac{2}{3})/(1,0) \rightarrow 1 + c\alpha 3^{a} = \frac{2}{3} \longrightarrow$
$c\alpha 3^{a} = -\frac{1}{3} \rightarrow \boxed{a=-1, c=-1} \rightarrow 1 + -3^{bx-1} \longrightarrow$
$1 + -3^{b-1} = 0 \longrightarrow -3^{b-1} = -1 \rightarrow b-1=0 \rightarrow \boxed{b=1}$
$\boxed{f(-1) = \frac{8}{9}}$

۳
$y = c + \log_5^{ax+b} \longrightarrow (0,2)/(2/4,0) \rightarrow c + \log_5^{b} = 2$
$\frac{b}{2/4a+b} = 25 \quad -\log_5^{\frac{b}{2/4a+b}} = 2 \longleftarrow \frac{-(c + \log_5^{2/4a+b})}{\log_5^{b} - \log_5^{2/4a+b}} = 2$
$\rightarrow 60a + 25b = b \rightarrow \frac{a}{b} = \frac{-24}{60} = \boxed{-0/4}$

۴
$y = \log_4^{(|x^2-2|-x)} \longrightarrow |x^2-2| - x > 0$
$\boxed{x^2 \geq 2}\; x^2 - x - 2 > 0$
$\boxed{x^2 < 2}\; 2 - x^2 - x > 0 \rightarrow x^2 + x - 2 < 0$
$-x^2 - x - 2 > 0 \longrightarrow$ (sign chart: -1, 2; $+$ $-$ $+$)
$-x^2 + x - 2 < 0 \longrightarrow$ (sign chart: -2, 1; $+$ $-$ $+$)
$\rightarrow (-\infty, -\sqrt{2}] \cup (2, +\infty)$
$\rightarrow (-\sqrt{2}, 1)$ اصناع
$D_y = \mathbb{R} - [1,2]$

۵
$y = 2 + 2^{b-ax} \longrightarrow (1,4)/(-1,10) \rightarrow 2 + 2^{b-a} = 4 \rightarrow 2^{b-a} = 2 \longrightarrow$
$b - a = 1 \;/\; 2 + 2^{b+a} = 10 \rightarrow 2^{b+a} = 8 \rightarrow b + a = 3$
$\longrightarrow \boxed{b=2, a=1} \longrightarrow 2b - a = 4 - 1 = \boxed{3}$

$y = -2 + \left(\frac{1}{2}\right)^{Ax+B}$ ⟶ $(1,0)/(2,2)$ ⟶ $-2 + \left(\frac{1}{2}\right)^{A+B} = 0 \to \left(\frac{1}{2}\right)^{A+B} = 2$

$\to A+B = -1 \,/\, -2 + \left(\frac{1}{2}\right)^{2A+B} = 2 \to \left(\frac{1}{2}\right)^{2A+B} = 4 \to 2A+B = -2$ ۶

$\to A = -1,\ B = 0 \to y = -2 + \left(\frac{1}{2}\right)^{-x}$ ⟶ $f(3) = 6$

$y = \left(\frac{8}{9}\right)^x = \frac{1}{6}$ ⟶ $y = \frac{x \cdot h}{y \text{ داریم}}$ $\frac{2^{3x}}{3^{2x}} = \frac{1}{6} \to 2^{3x+1} = 3^{2x-1}$ ⟶ $\log_3$

$(3x+1)\log_3^2 = (2x-1)\log_3^5 \to \frac{\log_3^5}{\log_2^5} = \log_3^2 = \frac{7}{12}$ ⟶ ۷

$\downarrow \times 12$

$21x + 7 = 24x - 12 \to x = \frac{19}{3}\,h \xrightarrow{\times 60}$ 380′

$\left(\frac{7}{8}\right)^x = \frac{1}{7}$ ⟶ $y = \frac{x \text{ هفته}}{y \text{ داریم}}$ $\frac{7^x}{2^{3x}} = \frac{1}{7} \to 7^{x+1} = 2^{3x}$ ⟶ $\log_3$ ۸

$(x+1)\log_3^7 = 3x\log_3^2 \to \log_3^7 = \frac{1}{\frac{6}{10}} = \frac{10}{6}$

$\downarrow \times 48$ $\log_3^2 = \frac{1}{\frac{16}{10}} = \frac{10}{16}$

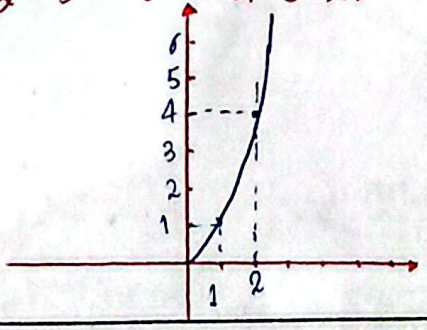
$80x + 80 = 90x \to x = 8$ هفته $\xrightarrow{+7}$ 56 روز

$\frac{1}{3}C_0 = C_0\left(\frac{V-a}{V}\right)^n$ $V = 100\,lit$ $a = 4$ $\frac{1}{3} = \frac{96^n}{100^n} = \frac{2^{5n} \times 3^n}{100^n}$

$2^{5n} \times 3^{n+1} = 100^n \xrightarrow{\log_{10}^0} 5n(\log 2) + (n+1)(\log 3) = 2n$ ۹

$\to 1/5n + 0/48n + 0/48 = 2n \to 0/48 = 0/02n \to n = 24$

الف) $y = 9^{\log_3^x} - x^2,\ x > 0$



ب) $\log x^2 = 2\log x,\ x \in \mathbb{R} - \{0\}$