

$$y = 1 - \log_c(ax - b)$$

$$b + c = -\frac{3}{4}$$

$$(a + c)b = ? = (1 + \frac{1}{4})(-2) = -\frac{5}{2}$$

سوال ۱

$$\rightarrow n = 0 \rightarrow 1 - \log_c^{-b} = 2 \rightarrow -b = c^{-1} \rightarrow b = -\frac{1}{c}$$

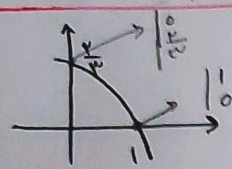
$$c + b = -\frac{3}{4}$$

$$\rightarrow n = -1 \rightarrow 1 - \log_c^{-1/2a - b} = 0$$

$$\rightarrow -1/2a - b = c \Rightarrow -1/2a = c - c^{-1} \Rightarrow a = 1$$

$$\Rightarrow b + c = -\frac{3}{4} \rightarrow c - \frac{1}{c} = -\frac{3}{4} \rightarrow c^2 - 1 + \frac{3}{4}c = 0 \rightarrow (c - \frac{1}{4})(c + 2) = 0$$

$$b = -2 \text{ و } c = \frac{1}{4} \leftarrow \begin{matrix} \text{ممنوع} \\ \text{ممنوع} \end{matrix}$$



$$f(x) = 1 + c \times 3^{a+bx}$$

$$f(-1) = ?$$

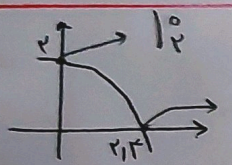
سوال ۲

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

$$\Rightarrow 3^b = 3 \rightarrow b = 1$$

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

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



$$y = c + \log_a(9x + b)$$

$$\frac{a}{b} = ?$$

$$\frac{a}{b} = \frac{-10 \times \omega^{-c}}{2 \omega \times \omega^{-c}} = -\frac{5}{\omega}$$

سوال ۳

$$\rightarrow n = 0 \rightarrow c + \log_a^b = 2 \rightarrow b = a^{2-c}$$

$$\rightarrow n = 2 \rightarrow c + \log_a^{2/3(a+b)} = 0 \rightarrow 2/3(a+b) = a^{-c}$$

$$\rightarrow 2/3a = a^{-c} - \omega^{2-c} = \omega^{-c} (1 - \omega^{2-c})$$

$$\rightarrow a = -10 \times \omega^{-c}$$

$$f(x) = \log_f(|x^2 - 2| - x)$$

$$D_f = ?$$

سوال ۴

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

فازن

$$\begin{cases} \sqrt{2} < x \rightarrow x^2 - x - 2 > 0 \rightarrow (x-2)(x+1) \rightarrow \begin{matrix} + & - & + \\ - & + & - \end{matrix} \Rightarrow x > 2 \\ -\sqrt{2} < x < \sqrt{2} \rightarrow x^2 + x - 2 < 0 \rightarrow (x+2)(x-1) \rightarrow \begin{matrix} + & - & + \\ - & + & - \end{matrix} \Rightarrow -\sqrt{2} < x < 1 \\ x < -\sqrt{2} \rightarrow x^2 - x - 2 > 0 \rightarrow (x-2)(x+1) \rightarrow \begin{matrix} + & - & + \\ - & + & - \end{matrix} \Rightarrow x < -\sqrt{2} \end{cases}$$

$$\Rightarrow (-\infty, -1) \cup (2, +\infty)$$

$$f(x) = 2 + 2^{b-ax}$$

$$2b - a = ?$$

$$g(x) = -x^2 - 3x + 1$$

$$x=1 \rightarrow \frac{1}{f}$$

$$\text{محل نقطه قطع} = 1$$

$$f^{-1}(1.0) = -1$$

سوال ۵

$$x=1 \rightarrow 2 + 2^{b-a} = 2 \rightarrow b - a = 1$$

$$x=-1 \rightarrow 2 + 2^{b+a} = 10 \rightarrow b + a = 3 \Rightarrow \begin{cases} b - a = 1 \\ b + a = 3 \end{cases} \Rightarrow \begin{cases} a = 1 \\ b = 2 \end{cases}$$

$$\Rightarrow 2b - a = 4 - 1 = 3$$

$f(x) = -2 + (\frac{1}{4})^{A+B}$ $y = x^2 - x$ طول نقاط قطع = 1, 2 $f(3) = ?$ سوال 9

$\rightarrow 1, 2$

$\rightarrow n=1 \rightarrow -2 + (\frac{1}{4})^{A+B} = 1 \rightarrow A+B = -1$
 $\rightarrow n=2 \rightarrow -2 + (\frac{1}{4})^{2A+B} = 4 \rightarrow 2A+B = -2 \rightarrow A = -1, B = 0$
 $\rightarrow n=3 \rightarrow -2 + 2^3 = 4$

عوض \rightarrow در ساعت $\frac{1}{4}$ از جیب باقی مانده از دست می رود $\frac{1}{4}$ از جیب باقی مانده = ? دقیقه $\Rightarrow \frac{19}{x} \times 4\% = 380$ سوال 9

$(\frac{A}{9})^{\frac{t}{11}} \times x = \frac{1}{4} x \rightarrow \log \frac{1}{4} = t \rightarrow \frac{-\log 2 - \log 2}{2 \log 2 - 2 \log 3} = \frac{1}{3.14} (-1 - \frac{2.14}{1.14}) = \frac{-1.4 - 2.14}{4.12 - 2.28}$
 $\log 2 = 0.3 \rightarrow \frac{1 - \log 2}{\log 2} = 0.3 \rightarrow \frac{1}{0.7} = \log 2$
 $\log 3 = 0.48 \rightarrow \frac{1 - \log 3}{\log 3} = 0.48 \rightarrow \frac{1}{1.48} = 0.48 \log 3 \rightarrow \log 3 = \frac{0.48}{1.48}$
 $\frac{-3.18}{-1.4} = \frac{19}{3}$ ساعت

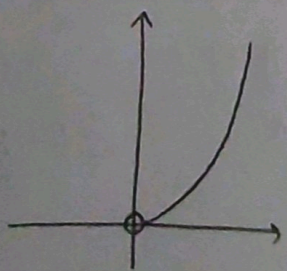
عوض \rightarrow در دقیقه $\frac{1}{8}$ در ساعت از جیب $\frac{1}{8}$ باقی مانده از دست می دهد $\frac{1}{8}$ از جیب باقی مانده = روز؟ $\log 3 \approx 0.48, \log 2 \approx 0.3$ سوال 9
 ادز 24 = هفته 8

$(\frac{V}{8})^{\frac{t}{11}} \times x = \frac{1}{8} x \rightarrow \log \frac{1}{8} = t \rightarrow \frac{-\log 2 - \log 2 - \log 2}{\log 2 - 3 \log 2} = \frac{\log 2 \times \frac{-1}{0.3}}{\log 2 (\frac{1}{0.3} - \frac{3}{1.14})} = \frac{\frac{1.6}{0.3}}{\frac{1.6}{1.2} - \frac{1.6}{0.3}} = \frac{1.6}{0.3} = \frac{1}{4}$
 $\log 2 = 0.3 \rightarrow \frac{\log 3}{0.3} = \log 2$
 $\log 3 = 0.48 \rightarrow \frac{\log 3}{1.48} = \log 2$
 هفته 8

عوض \rightarrow در روز $\frac{1}{100}$ از جیب باقی مانده $\frac{1}{100}$ از جیب باقی مانده = روز؟ $\log 3 \approx 0.48, \log 2 \approx 0.3$ سوال 9

$(\frac{94}{100})^{\frac{t}{11}} \times x = \frac{1}{100} x \rightarrow \log \frac{1}{100} = t \rightarrow \frac{-\log 94}{\log 94 - 2} = \frac{-\log 94}{\log 94 + 2 \log 2 - 2} = \frac{-4.41}{4.41 + 1.1 - 2}$
 $n =$ غلظت اولیه
 3×2^2
 روز 24

الف) $y = 9 \log 3^x \rightarrow n \log 9 = n^2$ سوال 10
 $D: n > 0$



ب) $y = \log x^2 = 2 \log x$
 $D: R - \{0\}$

