محمد حسینی

۱۷٫۷۵

$y = 1 - \log_c^{(-b)} \rightarrow -1 = \log_c^{-b} \rightarrow c^{-1} = -b \rightarrow \frac{1}{c} = b$ (۱)

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

$c^2 + 3c - 4 = 0 \quad (c+4)(c-1) \begin{cases} -4 \\ 1 \end{cases}$

۹

1) $x = 0 \rightarrow y = 1 - \log_c^{-b} = 2 \rightarrow bc = -1$ $\begin{cases} b + c = -\frac{3}{2} \\ bc = -1 \end{cases} \rightarrow \begin{cases} b = -2 \checkmark \\ b = \frac{1}{2} \times \end{cases}$

b نمی‌تواند (+) باشد چون در این صورت c منفی می‌شود

$x = -1.5 = -\frac{3}{2} \rightarrow 1 - \log_{-\frac{1}{2}}^{-\frac{3}{2}a + 2} = 0 \rightarrow a = 1 \quad (a+c)b = -3$

$a + b = (100)$

$1 + c \times 3 \rightarrow = 1 + 3^a \times 3^b \times c \rightarrow 1 = 3^{a} \times c \times \frac{1}{3}$ (۲) (۵)

۳

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

$y = 1 + c \times 3^a \times 3^{-1} \rightarrow y = 1 - \frac{1}{9} = \frac{8}{9}$

(٣) $٢١٤٥ \rightarrow ٥ = C + \log_{a}^{١٠٤a+b} \rightarrow a^{-C} = ١١٤a+b$

(٤) $٢ = C + \log_{a}^{b} \rightarrow a^{٢-C} = b \rightarrow a^{-C} = \frac{b}{a^{٢}}$

$\rightarrow \frac{b}{a^{٢}} - b = \frac{١٤}{١٠} a \rightarrow \frac{a}{b} = -\frac{٣}{٥} = -٠٫٦$

31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

$b^2-4ac=1-4(1)(-1)=$

$|m^2-2|-m>0 \Rightarrow |m^2-2|>m$

$m^2-2<-m \Rightarrow m^2+m-2<0$

$m^2-2>m \Rightarrow m^2-m-2>0$

$(m+2)(m-1)<0$, $(m-2)(m+1)>0$

$(-2,1) \cup (-\infty,-1)\cup(2,+\infty) \Rightarrow \mathbb{R}-[1,2]$

د

$-n^{۲} - ۲n + ۸ \xrightarrow{n=1} ۴ = ۲ + ۲^{b-a} \to ۲ = ۲^{b-a} \to b-a = 1$ (الف)

$۲ + ۲^{b-an} \longrightarrow ۲ + ۲^{b+a} \to b+a = ۳$ (5)

$b-a=1 \longrightarrow ۲b = ۴ \to b = ۲ \to a = 1 \longrightarrow ۴-1 = ۳$

$b+a = ۳$

(ج)

$-۲ + (\frac{1}{۲})^{A+B} = 1 \longrightarrow (\frac{1}{۲})^{A+B} = ۲$

$-۲ + (\frac{1}{۲})^{۲A+B} = ۲ \longrightarrow (\frac{1}{۲})^{۲A+B} = ۴$ (5)

$A + B = -1$

$۲A + B = -۲$

$A = -1$

$B = 0$

$f(۳) = -۲ + (\frac{1}{۲})^{-1\times ۳} = ۶$

(7)

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

$t(\log 8 - \log 9) = -\log 2 - \log 2$

$t(3\log 2) - (2\log 3) = 3t\log 2 - 2t\log 3 = -\log 3 - \log$

$3t\log 2 + \log 2 = 2t\log 3 - \log 3 \to \log 2(3t+1) =$

$\log 3(2t-1) \to \frac{\log 3}{\log 2} = \log_2 3 = \frac{24}{14}$ (د)

$3t+1 = \frac{24}{14}(2t-1) \to t = \frac{19}{3}\ h$

$\frac{19}{3}\ h \times \frac{60\,min}{1\,h} = 380\,min$

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(8)

$-0.125+1 = \frac{875}{1000} = \frac{7}{8} \to (\frac{7}{8})^t = \frac{1}{7} \to \log\frac{1}{7} = \log(\frac{7}{8})^t$

$t(\log\frac{7}{8}) = \log\frac{1}{7} \to t(\log 7 - 3\log 2) = -\log 7$

$t\log 7 - 3t\log 2 = -\log 7 \to t\log 7 + \log 7 = 3t\log 2$ (د)

$t+1 = 3t\log_7 2 \to t+1 = \frac{9}{8}t \to \frac{1}{8}t = 1$

$t = 8 \to 8\times 7 = 56$ هفته

(۹)

$a_1 \left(\frac{100-4}{100}\right)^n = \frac{1}{3} a \to \left(\frac{96}{100}\right)^n = \frac{1}{3} \to n \log \frac{24}{25} = \log \frac{1}{3}$

$n(3\log 2 + \log 3 - 2\log 5) = n(\log 3 + 3\log 2 - 2(1-\log 2)) = -\log 3$

10:00

(۲)

$n(0/48 - 1/4 + 0/9) = -0/48 \to n = 24$

11:00

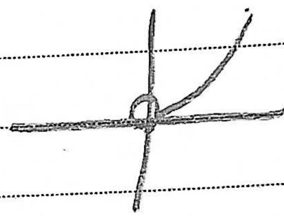
12:00

(۱/۷۵)

$9 \log_3^m \to m \log_3^9$

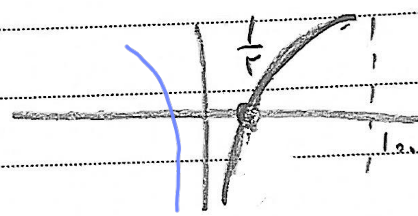
13:00

m^2



14:00

$\log m^2 \to 2 \log_{10}^m$



15:00

$D = \mathbb{R} - \{0\}$

16:00

17:00