

تربيع متساوي

عزبان حاجي عليزاده

12

$$1 - \log_c b = 2 \quad c^{-1} = -b \quad -cb = 1$$

$$\log_c b = -1 \quad \frac{1}{c} = -b \quad cb = -1$$

$$t^2 + \frac{p}{t} + 1 = 0 \quad c = \frac{1}{p} \checkmark$$

$$t^2 + pt - 1 = 0 \quad b = -2 \checkmark$$

$$(a+c)b = (1 + \frac{1}{p}) - 2 = -1 \checkmark$$

$$1 - \log_c^{-1} a - b = 0 \quad \frac{p}{c} = -\frac{p}{c} a \quad (a+c)b = (1 + \frac{1}{p}) - 2 = -1 \checkmark$$

$$c = -1, a = -b \quad a = 1 \checkmark$$

$$\frac{1}{c} = -\frac{p}{c} a + 2$$

(2)

$$1 + c \times p^{a+b} = 0$$

$$1 + c \times p^a = \frac{p}{w}$$

$$1 + c \times p^{a-b} = ?$$

$$c \times p^{a+b} = -1$$

$$c \times p^a = \frac{-1}{p^b} \div = p^b = p \quad w^{-b} = w^{-1} = \frac{1}{w}$$

$$b = 1 \checkmark$$

$$\frac{-1}{p} \times \frac{1}{p} = \frac{-1}{p^2}$$

$$1 + (\frac{-1}{p^2}) = \frac{p^2 - 1}{p^2} \checkmark$$

(2)

$$c + \log_a b = 2$$

$$c + \log_a p^{a+b} = 0$$

$$c = -\log_a p^{a+b}$$

$$\log_a b - \log_a p^{a+b} = 2$$

$$\frac{b}{p^{a+b}} = 2a$$

$$90a + 2ab = b$$

$$90a = -2ab$$

$$da = -2b$$

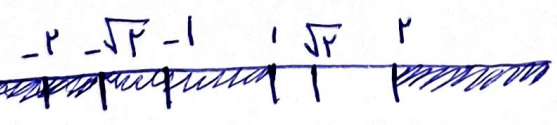
$$a = \frac{-2}{a} b$$

$$\frac{a}{b} = \frac{-2}{a} \frac{b}{b} = \frac{-2}{a} \checkmark$$

(2)

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

$$\left. \begin{matrix} x > \sqrt{2} \\ x < -\sqrt{2} \end{matrix} \right\} x^2 - x - 2 > 0 \quad (x-2)(x+1) > 0$$



$$-\sqrt{2} < x < \sqrt{2} \rightarrow x^2 + x - 2 < 0$$

$$\frac{-1}{+1} - \frac{2}{+1} = \frac{-3}{1}$$

$$\frac{(x+2)(x-1)}{+1 - 1} = \frac{-3}{1}$$

$$D_f = \mathbb{R} - [1, 2] \checkmark$$

(2)

$$p + p^{b-a} = p$$

$$p + p^{b+a} = 10$$

$$p^{b-a} = 1$$

$$p^{b+a} = 10$$

$$b-a = 1$$

$$b+a = 10$$

$$b+a = 10$$

$$pb = p$$

$$pb - a = p - 1 = p \checkmark$$

$$b = 2 \checkmark \quad a = 1 \checkmark$$

(2)

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

$$\left(\frac{1}{r}\right)^{A+B} = r$$

$$r^{-A-B} = r$$

$$-A-B=1$$

$$-rA-B=r$$

$$-A=1 \quad A=-1 \quad B=0$$

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

$$\left(\frac{1}{r}\right)^{A+B} = r$$

$$r^{-A-B} = r$$

$$-rA-B=r$$

$$-r + \left(\frac{1}{r}\right)^{A+B}$$

$$-r + \left(\frac{1}{r}\right)^{-1} = -r + r = 0 \quad \checkmark$$

(T)

$$P = P_0 \times e^{kt}$$

$$\frac{1}{9} P_0 = P_0 \times e^{\frac{t}{9}}$$

$$\frac{1}{9} = e^{\frac{t}{9}}$$

0

v

$$P = P_0 \times e^{kt}$$

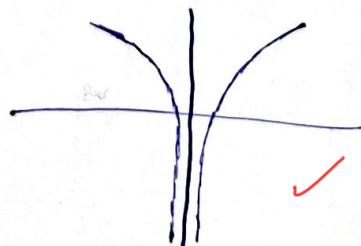
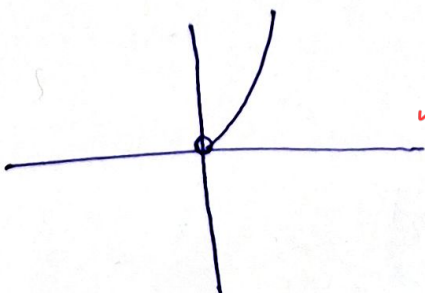
$$\frac{1}{v} P_0 = P_0 \times e^{\frac{t}{\lambda}}$$

$$\frac{1}{v} = e^{\frac{t}{\lambda}}$$

0

\lambda

$$\text{الف : } x^{\log_a x} = x^r$$



(T)

lc

$$\text{حجم باقیمانده} = \frac{M_0}{4} = M_0 \left(\frac{1}{4}\right)^t \rightarrow \left(\frac{1}{4}\right)^t = \frac{1}{4} \quad -V$$

$$\xrightarrow{\lg} t \lg \frac{1}{4} = \lg \frac{1}{4} \rightarrow t (r \lg r - r \lg r) = -(\lg r + \lg r)$$

$$t = \frac{-(\lg r + \lg r)}{r \lg r - r \lg r} \xrightarrow{\div \lg r} t = \frac{-(\lg r + 1)}{r \lg r - r} = \frac{-(\frac{V}{1r} + 1)}{r(\frac{V}{1r}) - r} = \frac{19}{r} \quad \boxed{19}$$

$$\frac{\lg_r^5}{\lg_r^8} = \frac{\lg r}{\lg r} = \frac{1, r}{r, r} = \frac{V}{1r}$$

$$r \Lambda = \min = 90 \times \text{ساعت}$$

$$\text{حجم باقیمانده} = \frac{M_0}{V} = \left(\frac{V}{\Lambda}\right)^t M_0 \rightarrow \left(\frac{V}{\Lambda}\right)^t = \frac{1}{V} \quad -\Lambda$$

$$\xrightarrow{\lg r} t \lg_r \frac{V}{\Lambda} = -\lg_r V \rightarrow t (\lg_r V - r \lg_r r) = -\lg_r V$$

$$t \left(\frac{10}{4} - r \times \frac{5}{n}\right) = -\frac{10}{4} \rightarrow t = \Lambda \text{ سال} \times V = 54 \text{ سال}$$

$$(0,94)^n A_0 = \frac{1}{r} A_0 \rightarrow (0,94)^n = \frac{1}{r} \quad -9$$

$$\xrightarrow{\lg} n \lg 0,94 = -\lg r \rightarrow n = \frac{-\lg r}{\lg 94 - r}$$

$$n = \frac{\lg r}{r - \lg(r^5 \times r)} = \frac{\lg r}{r - (5 \lg r + \lg r)} = \frac{0,19}{r - (5(0,1r) + 0,19)}$$

$$= \boxed{24}$$