

تاریخ: / /

$$(0, 2) \rightarrow 2 = 1 - \log_c^{-b} \rightarrow \log_c^{-b} = -1 \rightarrow -b = c^{-1} = \frac{1}{c} \rightarrow b = -\frac{1}{c}$$

$$\rightarrow c - \frac{1}{c} = -\frac{1}{c} \rightarrow rc^r + \frac{1}{c} - r = 0 \rightarrow c = -r, b = \frac{1}{r} \text{ غوغ}$$

$$\rightarrow c = \frac{1}{r}, b = -r \sqrt{\text{غوغ}}$$

$$\left(\frac{-r}{r}, 0\right) \rightarrow 0 = 1 - \log_c \frac{-r}{r} a - b \rightarrow \log_c \frac{-r}{r} a - b = 1 \rightarrow c = \frac{-r}{r} a - b$$

$$\rightarrow \frac{-r}{r} a = \frac{-r}{r} \rightarrow a = 1 \rightarrow (a+c)b = \left(1 + \frac{1}{r}\right) \times (-r) = -r \left[ \right]$$

$$\left. \begin{aligned} (1, 0) \rightarrow 0 = 1 + c \times r^{a+b} \rightarrow c \times r^a \times r^b = -1 \\ (0, \frac{r}{r}) \rightarrow \frac{r}{r} = 1 + c \times r^a \rightarrow c \times r^a = \frac{-1}{r} \end{aligned} \right\} \rightarrow \frac{c \times r^{a+b}}{c \times r^a} = \frac{-1}{\frac{-1}{r}} = r = r^b \rightarrow b = 1$$

$$\rightarrow b = 1 \rightarrow c \times r^a \times r = -1 \rightarrow r^a \times c = \frac{-1}{r} *$$

$$f(-1) = 1 + c \times r^{a-1} = 1 + c \times r^a \times \frac{1}{r} \rightarrow 1 + \left(\frac{-1}{r}\right) \times \left(\frac{1}{r}\right) = \frac{1}{r} \left[ \right]$$

$$\left. \begin{aligned} (0, 2) \rightarrow 2 = c + \log_a^b \rightarrow c = 2 - \log_a^b \\ (r, \frac{r}{r}, 0) \rightarrow 0 = c + \log_a^{rfa+b} \rightarrow c = -\log_a^{rfa+b} \end{aligned} \right\} \rightarrow 2 - \log_a^b = -\log_a^{rfa+b}$$

$$\rightarrow 2 = \log_a^b - \log_a^{rfa+b} \rightarrow 2 = \log_a \frac{b}{rfa+b} \rightarrow ra = \frac{b}{rfa+b} \rightarrow r \cdot a \cdot r \cdot ab = b$$

$$\rightarrow r \cdot a = r \cdot b \rightarrow \frac{a}{b} = \frac{-r}{r} = \frac{-r}{a} \left[ \right]$$

$$f(x) = \log_r (|x^r - r| - x) \rightarrow |x^r - r| - x > 0 \rightarrow x > \sqrt[r]{r} \rightarrow x^r - x - r > 0 \rightarrow \frac{x}{|x^r - r|} > \frac{1}{r}$$

$$\rightarrow x < \sqrt[r]{r} \rightarrow -x^r - x + r > 0 \rightarrow \frac{x}{|-x^r - r|} > \frac{1}{r} \rightarrow (-r, 1)$$

$$D = (-r, 1) \cup (r, +\infty)$$



$$f(x) = r + r^{b-ax} \quad g(x) = r + r^{a-x} \quad \dots \quad d$$

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

$$f(1) = -1 \rightarrow f(-1) = 1 \rightarrow r + r^{b+a} = 1 \rightarrow r^{b+a} = 1 \rightarrow b+a=0$$

$$r^{b-a} = r(r) = 1 = r^0$$

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

$$x=r \rightarrow -r + \left(\frac{1}{r}\right)^{rA+B} = r \rightarrow \left(\frac{1}{r}\right)^{rA+B} = 2r \rightarrow rA+B = -1$$

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

$$P = P_0 \times \left(\frac{1}{r}\right)^t \rightarrow \frac{1}{r} P_0 = P_0 \times \left(\frac{1}{r}\right)^t \rightarrow \frac{1}{r} = \left(\frac{1}{r}\right)^t$$

$$\rightarrow \log_{\omega} \frac{1}{r} = \log_{\omega} \left(\frac{1}{r}\right)^t \rightarrow -\log_{\omega} r = t \log_{\omega} \frac{1}{r} \rightarrow -(\log_{\omega}^r + \log_{\omega}^r) = t(r \log_{\omega}^r - r \log_{\omega}^r)$$

$$\rightarrow -\left(\frac{1}{r} + \frac{1}{r}\right) = t \left(r \times \frac{1}{r} - r \times \frac{1}{r}\right) \rightarrow t = \frac{-\left(\frac{2}{r}\right)}{\left(\frac{\omega}{r} - \frac{1}{r}\right)} = \frac{-\frac{2}{r}}{\frac{\omega - 1}{r}} = \frac{-2}{\omega - 1} = \frac{2}{1 - \omega}$$

$$P = P_0 \times \left(1 - \frac{r\omega}{1 \dots}\right)^t \rightarrow \frac{1}{r} P_0 = P_0 \times \left(\frac{1}{r}\right)^t \rightarrow \log_{\omega} \frac{1}{r} = \log_{\omega} \left(\frac{1}{r}\right)^t$$

$$\rightarrow t = \frac{\log_{\omega} \frac{1}{r}}{\log_{\omega} \frac{1}{r}} = \frac{\log_{\omega}^1 - \log_{\omega}^r}{\log_{\omega}^1 - r \log_{\omega}^r} = \frac{0 - \frac{1}{r}}{\frac{1}{r} - r \times \frac{1}{r}} = \frac{-\frac{1}{r}}{\frac{\omega}{r} - \frac{1}{r}} = \frac{-\frac{1}{r}}{\frac{\omega - 1}{r}} = \frac{-1}{\omega - 1} = \frac{1}{1 - \omega}$$

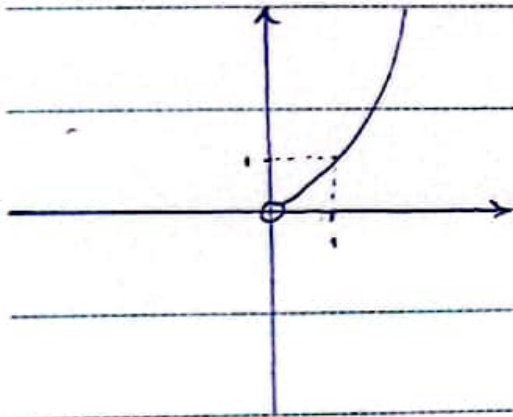
$$\left(\frac{1 \dots - r}{1 \dots}\right)^t = \frac{1}{r} \rightarrow \left(\frac{r}{r\omega}\right)^t = \frac{1}{r} \rightarrow \left(\frac{r\omega}{r}\right)^t = r$$

$$\rightarrow \log_{\omega} \left(\frac{r\omega}{r}\right)^t = \log_{\omega} r \rightarrow t \log_{\omega} \frac{r\omega}{r} = \log_{\omega} r \rightarrow t = \frac{\log_{\omega} r}{\log_{\omega} \frac{r\omega}{r} - \log_{\omega} r}$$

$$\rightarrow \frac{\log_{\omega} r}{r(\log_{\omega}^1 - \log_{\omega}^r) - (\log_{\omega}^r + r \log_{\omega}^r)} = \frac{1/r}{r(1 - r) - (1/r + r)}$$



$$\text{الف) } y = 9^{\log_3 x} = x^{\log_3 9} = x^2 \quad D = (0, +\infty)$$



$$\text{ب) } y = \log_2 x^2 \quad D = \mathbb{R} - \{0\}$$

