

تجزیه و تحلیل

توجه

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

$$b = -r$$

$$1 - \log_{\frac{1}{r}}^{-\frac{r}{r}a+r} = 0 \rightarrow \frac{1}{r} = -\frac{r}{r}a+r \rightarrow -\frac{r}{r} = -\frac{r}{r}a \rightarrow a=1 \quad (a+c)b = \boxed{-r}$$

$$2, \frac{c \times r^{a+b}}{c \times r^a} = -1 \rightarrow r^b = r \rightarrow b=1$$

$$f(-1) = 1 + \frac{c \times r^{a+1}}{\frac{1}{r} \times r^{-1}} = 1 - \frac{1}{a} = \boxed{\frac{1}{a}}$$

$$3, \log_0^b - \log_0^{rfa+b} = r \rightarrow \log_0 \frac{b}{rfa+b} = r \rightarrow \frac{b}{rfa+b} = r \rightarrow r_0 a + r b = b \rightarrow \cancel{b}$$

$$\rightarrow r_0 a = -r b \rightarrow \frac{a}{b} = \frac{-r}{r_0} = \boxed{\frac{-r}{a}}$$

$$4, |x^r - r| - x > 0$$

| | | |
|-----------------------------------------------------|----------------------------------------------------|-----------------------------------------------------|
| $x^r - r > 0$ | $x^r + r - r < 0$ | $x^r - r - r > 0$ |
| $\frac{-r}{+} \quad \frac{-1}{-} \quad \frac{+}{+}$ | $\frac{-1}{+} \quad \frac{r}{-} \quad \frac{+}{+}$ | $\frac{-r}{+} \quad \frac{-1}{-} \quad \frac{+}{+}$ |

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$D = \mathbb{R} - [1, r]$

$$5, \left. \begin{aligned} r + r^{b-a} = f &\rightarrow r^{b-a} = r \rightarrow b-a=1 \\ r + r^{b+a} = 1 &\rightarrow r^{b+a} = 1 \rightarrow b+a=r \end{aligned} \right\} \begin{aligned} b=r \\ a=1 \end{aligned} \rightarrow r^{b-a} = f-1 = \boxed{r}$$

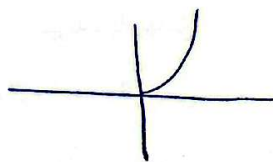
$$6, \left. \begin{aligned} -r + \left(\frac{1}{r}\right)^{A+B} = 0 &\rightarrow \left(\frac{1}{r}\right)^{A+B} = r \rightarrow A+B = -1 \\ -r + \left(\frac{1}{r}\right)^{rA+B} = r &\rightarrow \left(\frac{1}{r}\right)^{rA+B} = f \rightarrow rA+B = r \end{aligned} \right\} \begin{aligned} A = -1 \\ B = 0 \end{aligned} \rightarrow -r \left(\frac{1}{r}\right)^{-r+0} = \boxed{r}$$

$$\begin{aligned}
 \text{و، } \left(\frac{\Lambda}{9}\right)^m &= \frac{1}{9} & \log_{\frac{\Lambda}{9}} \frac{1}{9} &= \frac{\log_{\Lambda} \frac{1}{9}}{\log_{\Lambda} \frac{\Lambda}{9}} = \frac{-\log_{\Lambda} 9}{\log_{\Lambda} \Lambda - \log_{\Lambda} 9} = \frac{-\log_{\Lambda} 9}{1 - \log_{\Lambda} 9} = \frac{-\left(\frac{10}{14} + \frac{10}{14}\right)}{\frac{10}{14} - \frac{10}{14}} = \frac{19}{\cancel{14} - 14} \rightarrow \boxed{38 \text{ سنة}}
 \end{aligned}$$

$$\Lambda, \left(\frac{V}{\Lambda}\right)^n = \frac{1}{V} \rightarrow \log_{\frac{V}{\Lambda}} \frac{1}{V} = \frac{\log_{\Lambda} \frac{1}{V}}{\log_{\Lambda} \frac{V}{\Lambda}} = \frac{-\frac{10}{9}}{\frac{10}{9} - \frac{10}{14}} = \Lambda \rightarrow \Lambda \times V = \boxed{89}$$

$$\begin{aligned}
 9, \left(\frac{94}{100}\right)^n &= \frac{1}{10} \rightarrow \log_{\frac{94}{100}} \frac{1}{10} = \frac{-\log_{10} 10}{\log_{10} \frac{94}{100}} = \frac{-0.1}{\log_{10} 94 - \log_{10} 100} = \frac{-0.1}{1.97 - 2} = \frac{-0.1}{-0.03} = \boxed{33} \\
 &\downarrow \\
 &\Delta \log_{10} 94 + \log_{10} 10 = 1.97 + 0.03 = 2.00
 \end{aligned}$$

١٥) الف، $y = 9^{\log_{9} x} = x^9$
 $D = [0, +\infty)$



ب، $y = \log x^9 = 9 \log |x|$

