

کارنامه (نام خانوادگی) یازدهم دفتر B

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فایده خوان خواص مرتب نوشته شد

$$\log_n^m = a \quad \text{و} \quad \log_{mn}^{m^2 n} = b \rightarrow \frac{\log_n^{m^2 n}}{\log_n^{mn}} = \frac{b - \log_n^{m^2}}{\log_n^{m+1}} \rightarrow \frac{a+1}{a+1}$$

$$\frac{r(a+1)-1}{a+1} = r - \frac{1}{a+1} \rightarrow 1 < r - \frac{1}{a+1} < r \rightarrow [b] = 1$$

الف) $\sqrt{\frac{x}{\log \frac{1}{x}}} \rightarrow x > 0 \rightarrow \log \frac{1}{x} \neq 0 \rightarrow x \neq 1$ $x \rightarrow x = e \rightarrow \log \frac{1}{e} = -1$ $0 < x < 1$

ب) $\log x^2 - x - 2 \sim (x-1)(x+1) > 0$ $\frac{-1}{x+1}$ $\sqrt{x^2-1} + 1 \rightarrow x^2 - 1 > 0 \rightarrow x^2 > 1 \rightarrow x > 1 \rightarrow x < -1$ $\frac{-1}{x+1} \rightarrow (-\infty, -1) \cup (1, \infty)$

$$r \log_2^a + \log_a^{\sqrt{a}} = r \xrightarrow{x=9} r \log_{\frac{a}{\sqrt{a}}}^a + \log_{\frac{a}{\sqrt{a}}}^{\sqrt{a}} = r$$

$$m + \frac{1}{m} = \frac{m^2+1}{m} = r \rightarrow m^2 - r m + 1 = 0 \rightarrow (m-1)^2 \rightarrow m-1 = \log_2^a$$

$$\log \frac{a}{\sqrt{a}} = \log a - \log \sqrt{a} = \log \frac{1}{1} - (\log \sqrt{a} - \log \sqrt{a} = 0, \sqrt{a})$$

$$\log 9 = r \log \sqrt{a} = 0, \sqrt{a}$$

$$\log 14 = \log a + \log \sqrt{a} = \log 10 - \log 2 + \log \sqrt{a} = 0, 1$$

$$0, \sqrt{a} x^2 - 0, 1 x - 1/1 = 0 \xrightarrow{\Delta} 3x^2 - 1x - 1 = 0 \xrightarrow{\Delta} m^2 - 1x - \sqrt{a} = 0$$

$$\log \sqrt{a} = 0, \sqrt{a}$$

$$\log a^2 = 0, \sqrt{a} \rightarrow \log \sqrt{a} = r$$

$$\log \frac{1}{10} = \frac{\log \frac{1}{10}}{\log \frac{1}{10}} = \frac{\log \frac{1}{2} + \log \frac{1}{5}}{\log \frac{1}{2} + \log \frac{1}{5}} = \frac{r}{r} = 1$$

$$\log_{\frac{1}{\omega}} \frac{1}{\omega} = \frac{\log \frac{1}{\omega}}{\log \frac{1}{\omega}} = \frac{\log \omega}{\log \omega + 1}$$

$$\log_{\frac{1}{\omega}} \frac{1}{\omega} = \frac{1}{1} \rightarrow \frac{1}{\log \omega} = \frac{1}{1} \rightarrow \log \omega = 1$$

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

$$\log_{\frac{1}{\omega}} \frac{1}{\omega} = m \rightarrow \frac{1}{\omega} \log \frac{1}{\omega} = \frac{1}{\omega} (\log \omega + m \log \frac{1}{\omega}) \rightarrow \frac{1}{\omega} (1 + m \cdot \frac{1}{\omega}) = m$$

$$\log \frac{1}{\omega} = \frac{1}{\omega} \log \frac{1}{\omega} = \frac{1}{\omega} (\log \omega + \log \frac{1}{\omega})$$

$$m = 1 + \frac{1}{\omega} \log \frac{1}{\omega} = m$$

$$\frac{1}{\omega} (1 + \frac{1}{\omega} \log \frac{1}{\omega}) = 1 + \frac{1}{\omega} \log \frac{1}{\omega}$$

$$(\frac{1}{\omega})^{m-1} = (\frac{\omega}{\omega})^{m-1} \rightarrow \frac{1}{\omega^{m-1}} = \frac{\omega^{m-1}}{\omega^{m-1}} \rightarrow \omega^{m-1} = 1$$

$$\omega^{m-1} + \omega^{m-1} - 1 = 0 \rightarrow m^m + m^m - m = 0 \rightarrow m = \frac{1}{\omega} \log \frac{1}{\omega} = 1$$

$$\log_{\frac{1}{\omega}} \frac{1}{\omega} + 1 = \log \frac{1}{\omega} = \frac{1}{\omega}$$

$$\frac{1}{\omega} \log \frac{1}{\omega} = \frac{1}{\omega} (a+1) \Rightarrow \log \frac{1}{\omega} = \frac{1}{\omega} \log \frac{1}{\omega} \rightarrow \log \frac{1}{\omega} = \frac{1}{\omega}$$

$$\log_{\frac{1}{\omega}} (\omega^m - 1) = m$$

$$5 = \frac{b}{\frac{1}{a}} \rightarrow \frac{1}{5} = \frac{1/a}{b} \Rightarrow \frac{1}{5} = \frac{1}{ab} \Rightarrow ab = 5$$

$$\log \frac{1}{\omega} = \frac{1}{\omega} \log \frac{1}{\omega} = \frac{1}{\omega} \log \frac{1}{\omega} \rightarrow \log \frac{1}{\omega} = \frac{1}{\omega}$$

$$\frac{1}{\omega} \log \frac{1}{\omega} = \frac{1}{\omega} \log \frac{1}{\omega} = \frac{1}{\omega} \log \frac{1}{\omega} \rightarrow \log \frac{1}{\omega} = \frac{1}{\omega}$$

$$\left(\frac{1}{\omega}\right)^{\frac{1}{\omega}} = \omega^{-\frac{1}{\omega}} = \omega^{-\frac{1}{\omega}} = \omega^{-\frac{1}{\omega}} = \omega^{-\frac{1}{\omega}}$$