

A یازدهم ریاضی

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آمار بنی خرد

① $\log_n^m \leq a$ $\log_{mn}^{m^2n} \leq b$ $a, b > 0$ $[b] \leq ?$

$\log_{mn}^{m^2n} + \log_{mn}^m \leq 1 + \frac{1}{\log_{mn}^m} \leq$ ⑤

$1 + \frac{1}{1+a} \leq b$ $\frac{1}{\log_{mn}^m}$ از مخرج به صورتی

$[b] \leq 1$ از مخرج به صورتی

② $y = \sqrt{\frac{x}{\log \frac{1}{x}}} \rightarrow x > 0$ $\log \frac{1}{x} \neq 0 \rightarrow x \neq 1$

$\log \frac{1}{x} \rightarrow \frac{1}{x} > 0 \checkmark$

$\frac{x}{\log \frac{1}{x}} > 0 \rightarrow \frac{0}{-b+\frac{1}{x}} \rightarrow$ $D_f \leq (0, 1)$ اشتراک

ب) $\log \frac{1}{x} \rightarrow (x^2 - x - 2) \rightarrow 0 \rightarrow (x+1)(x-2) \neq 0$ ⑤

$\frac{-1}{+b} - \frac{2}{-b} +$

$\sqrt{x^2 - 1} + 1$ $x^2 - 1 > 0 \rightarrow (x-1)(x+1) > 0 \rightarrow$ $\frac{-1}{+b} + \frac{1}{+b}$

$\neq 0$ $\sqrt{x^2 - 1} + 1 \neq 0 \rightarrow \sqrt{x^2 - 1} \neq -1 \times$ $\frac{1}{+b} + \frac{1}{+b}$

نتیجه

$D_f \leq (-\infty, -1) \cup (2, +\infty)$

subject

$$\mu \log_a x + \log_a \sqrt{x} \leq 1 \quad x \leq a \quad a \leq ? \quad (3)$$

$$\log_a \mu + \frac{1}{\log_a \mu} \leq 1 \quad (5)$$

$$k + \frac{1}{k} \leq 1 \rightarrow k^2 - k + 1 \leq 0 \quad (k-1)^2 \leq 0$$

$$\log_a \mu \leq 1 \rightarrow \mu' \leq a \leq \mu$$

$$\log 2 \approx 0.15 \quad \log 3 \approx 0.18 \quad (4)$$

اختلاف ریشه های معادله

$$\left(\log \frac{a}{\mu} \right) x^2 + (\log \mu) x - \log 12 \leq 0$$

$$\left(\log 2 - \log 3 \right) x^2 + \left(2 \times 0.18 \right) x - \left(\log 2 + \log 3 \right) \leq 0$$

$$\log \frac{10}{\mu} \rightarrow \log 10 - \log \mu \leq 1 - 0.15 \leq 0.15$$

$$0.15 x^2 + 0.18 x - 1.15 \leq 0 \rightarrow \mu x^2 + 11 x - 11 \leq 0$$

$$x^2 + 11 x - 11 \leq 0 \quad (x-3)(x+11) \leq 0$$

$$\frac{\mu}{\mu} + \frac{11}{\mu} \leq \frac{15}{\mu}$$

$$\begin{array}{c} \mu \\ \downarrow \\ \mu \\ \downarrow \\ \mu \end{array} \quad \begin{array}{c} -11 \\ \downarrow \\ -11 \\ \downarrow \\ -11 \end{array}$$

subject _____

$$\log \frac{r}{\omega} \leq 1/n \quad / \quad \log \frac{r}{\omega} \leq 0/\omega \quad / \quad \log \frac{10}{12} \leq ? \quad (\omega)$$

$$\log \frac{r}{\omega} \leq \frac{10}{\omega}$$

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

$$\frac{r}{\omega/n}$$

$$\log \frac{r}{\omega} \leq 1/\omega$$

$$\log \frac{r}{\omega} \leq 1/4$$

$$\log \frac{r}{\omega} \leq ? \quad (\gamma)$$

$$\log \frac{r}{\omega} \leq \frac{10}{14}$$

$$\log \frac{r}{\omega} = \frac{\log r}{\log \omega}$$

$$\log \frac{r}{\omega} = \frac{\log r}{\log \omega}$$

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

$$\frac{r}{\omega} = \frac{10}{14}$$

$$\log \frac{r}{\omega} \leq m$$

$$\log \frac{r}{\omega} \leq ?$$

(✓)

$$\frac{r}{\omega} \log \frac{r}{\omega} \leq m$$

$$\log \frac{r}{\omega} \leq \frac{r}{\omega} x$$

$$(r \log \frac{r}{\omega} + (\frac{1}{r}) \log \frac{r}{\omega}) \leq \frac{r}{\omega} x \rightarrow r \log \frac{r}{\omega} + 1 = r x$$

$$\log \frac{r}{\omega} \leq \frac{r}{\omega} x - \frac{1}{r} \rightarrow \log \frac{r}{\omega} + \log \frac{1}{r} \leq \frac{r}{\omega} x + \frac{1}{r}$$

$$\log \frac{r}{\omega} \leq \frac{r}{\omega} x + \frac{1}{r}$$

$(\frac{1}{w}) \leq (\frac{1}{w}) \quad r^2 + r - 1 \leq 0 \rightarrow r^2 + r - 1 \leq 0$
 $(\frac{1}{r}) \leftarrow \frac{(x-1)(x+1)}{r} \rightarrow \frac{-1}{r} = -\frac{1}{r}$
 $ax+1 \rightarrow \frac{1}{r} + 1 \leq \frac{1}{r} \quad \log \frac{1}{r} \leq \frac{1}{r} \log \frac{1}{r}$

$\log \frac{1}{r} \leq \frac{1}{r} (1+a) \rightarrow \log \frac{1}{r} \leq \frac{1}{r} (1+a)$
 $\log \frac{1}{r} \leq r + ra \rightarrow \log \frac{1}{r} \leq \log \frac{1}{r} + \log \frac{1}{r}$
 $r \times r^2 - 1 \leq 100 \quad \log_{10} \frac{100}{10} \leq r \quad b \leq r^2$

$(\frac{1}{r}) \log \frac{1}{r} \rightarrow \frac{1}{r} \log \frac{1}{r} \leq \frac{ra}{b} \quad \frac{ra}{b} \leq \log \frac{1}{r} \quad b \leq \frac{ra}{\log \frac{1}{r}}$
 $\frac{b+c}{r} \leq a \rightarrow ra \leq b+c \rightarrow a-b \leq c \quad \frac{c}{a} \leq \frac{ra-b}{a}$
 $r - \frac{b}{a} \leq r - \left(\frac{ra}{\log \frac{1}{r}} \times \frac{1}{a} \right) \leq r - \left(\frac{r}{\log \frac{1}{r}} \right)$
 $r - r \log \frac{1}{r} \leq r - \log \frac{1}{r} \quad \frac{1}{r} \left(r - \frac{1}{\log \frac{1}{r}} \right)$
 $r = \frac{1}{\frac{1}{r} \log \frac{1}{r}} \leq r \log \frac{1}{r} \rightarrow \omega \log \frac{1}{r} \leq \omega \frac{1}{\frac{1}{r} \log \frac{1}{r}}$