

۱. پرسه طباطبائی - یازدهم دفتر - ۲. بنام خدا - ۳. الفبائی شماره ۲۳ -

$$\log_n^m = a \rightarrow n^a = m, \log_{mn}^{mr_n} = b \rightarrow \log_{n^{a+1}}^{n^{ra+1}} = b \rightarrow \frac{ra+1}{a+1} \log_n^{n^{a+1}} = b \quad -1$$

$$\frac{ya+1}{a+1} = b \rightarrow [b] \Rightarrow \left[\frac{a+1+a}{a+1} \right] \rightarrow \left[1 + \frac{a}{a+1} \right] = 1$$

۲- بنابر این صورت کسر بزرگتر از صفر است و برای اینکه کل عبارت طبق قوانین لاریج $y = \sqrt[n]{\log \frac{1}{x}}$ $n > 0$ $x = \frac{1}{f}$ بزرگتر از صفر باشد، مخرج آنرا باید مثبت باشد.

مبنای بنی منفرد یک است برای بنی و تو از منفرد بنی نخرج. α باید میان منفرد یک باشد از طرفی به خاطر

قواسم لایتم α صفر هم نمی تواند باشد $\Leftrightarrow \boxed{0 < \alpha < 1} \rightarrow D_f(\alpha)$

$$\log \frac{(x^2 - x - 2)}{\sqrt{x^2 - 1} + 1} = y \rightarrow I, x^2 - x - 2 > 0 \rightarrow (x - 2)(x + 1) > 0$$

$$I \rightarrow (-\infty, -1) \cup (2, +\infty)$$

x	-1	2
$P(x)$	$+$	$-$
	0	$+$

II, $x^2 - 1 > 0$ $\frac{x}{+|-|+} \rightarrow (-\infty, -1) \cup (1, +\infty) \leftarrow$ II
 $\downarrow$
 $1, -1$

I, II (N) $\Rightarrow \underline{(-\infty, -1) \cup (1, +\infty)}$ Glas

$$r \log_q^a \rightarrow \frac{r}{r} \log_{\sqrt{q}}^a \Rightarrow \log_{\sqrt{q}}^a / \log_a^{\sqrt{q}} = \log_a^{\sqrt{q}} \rightarrow \text{is the same} \quad -3$$

$$\log_a t \rightarrow t + \frac{1}{t} - r = 0 \xrightarrow{x=t} t^r - r(t+1) \rightarrow (t-1)^r \rightarrow t=1$$

$$\log_a a = 1 \rightarrow \boxed{a = 3}$$

— *Arman.*

$$\log r = 0/1^r \rightarrow \log 10 - \log r = \log \omega \rightarrow 1 - 0/1^r = 0/V = \log \omega \quad -r$$

$$\log r = 0/1^r$$

$$* (\log \omega - \log r) x^r + (r \log r) x - (\log r + \log \omega) =$$

$$\rightarrow \underbrace{(0/V - 0/1^r)}_{0/1^r} x^r + \underbrace{0/1^r x - 0/1^r - 0/V}_{-1/1} \Rightarrow r x^r + 1 x - 11 \quad x^r + 1 x - 1^r \rightarrow (x - 1^r)(x + 11)$$

$$\frac{r}{r} = \frac{-11}{r} \rightarrow \frac{r - (-11)}{r} = \frac{+11}{r} \quad \text{بغض}$$

$$\log \omega = \frac{1}{r} \rightarrow \log r = r \quad / \quad \log r = r/1^r / \log_{1^r} \Rightarrow \frac{\log r}{\log_{1^r}} = \frac{\log \omega + \log r}{\log r + \log r} \quad -\omega$$

$$\Rightarrow \frac{r+1}{r/1^r+1} = \frac{r}{r/1^r} = \frac{1\omega}{1^r} \quad \text{بغض}$$

$$\log \omega = 1/\omega \quad / \quad \log r = \frac{1}{\omega} \rightarrow \log r = \frac{\omega}{1} \quad -r$$

$$\log_{1\omega} r \Rightarrow \frac{\log r + \log r}{\log \omega + \log r} \rightarrow \frac{\frac{\omega}{1} + \frac{1}{\omega}}{\frac{1}{\omega} + \frac{1}{\omega}} = \frac{\frac{1^r}{\omega}}{\frac{1}{\omega}} = \frac{1^r}{1} = \frac{0}{1\omega} \quad \text{بغض}$$

$$\log_{1^r} \omega = m$$

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

$$\log_{1^r} \omega = m \rightarrow \log_{r^r} r + \log_{r^r} r \Rightarrow \frac{r}{r} \log r + \frac{1}{r} \log r = m$$

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

بغض

$$(m+1) \frac{r}{r} = \frac{r^m + r}{r} = \frac{r + r^m - 1}{r}$$

Arman

$$\left(\frac{r}{a}\right)^{r_{n-1}} = \left(\frac{a^r}{r^r}\right)^{r^r} \rightarrow \left(\frac{r}{a}\right)^{r_{n-1}} = \left(\frac{r}{a}\right)^{-r^r} \quad r_{n-1} = -r^r \quad -1$$

$$\rightarrow r^r + r_{n-1} \rightarrow r^r + r_{n-1} - r^r \rightarrow (r+1)(r-1) \rightarrow \frac{-r}{r} = -1, \frac{1}{r}$$

$$\log_{\frac{r}{a}}^{(4 \times \frac{1}{r} + 1)} \rightarrow \log_{\frac{r}{a}}^{\epsilon} \Rightarrow \log_{\frac{r}{a}}^{r^r} = \frac{r}{r} \log_r^r \Rightarrow \left(\frac{r}{r}\right) \text{ (بسط و جداسازی)}$$

$$\frac{r}{r} \log_r^{\sqrt{b}} = \frac{r}{r} + \frac{r}{r} \log_r^r \rightarrow \frac{r}{r} \log_r^{\sqrt{b}} = \frac{r}{r} (1 + \log_r^r) \quad -9$$

$$\log_r^{\sqrt{b}} = 1 + \log_r^r \rightarrow \log_r^{\sqrt{b}} = \log_r^r + \log_r^r \rightarrow \log_r^{\sqrt{b}} = \log_r^r \rightarrow \boxed{b = r^r} \quad \text{بسط و جداسازی}$$

$$\log_{\frac{r}{a}}^{\frac{1}{r}} \rightarrow \frac{-b}{-ra} \Rightarrow \frac{1}{\frac{-b}{-ra}} = \log \epsilon \Rightarrow \frac{ra}{b} = \log \epsilon \quad -10$$

$$\Rightarrow \frac{a}{b} = \frac{\log r}{r} = \frac{r \log r}{r^r} \Rightarrow \frac{\log r}{r} \quad \text{مثال: اگر } a = b + c \rightarrow \frac{ra}{b} = 1 + \frac{c}{b}$$

$$\Rightarrow r \left(\frac{\log r}{r} \right) = 1 + \frac{c}{b} \rightarrow \frac{c}{b} = -1 + \log r \quad \left\{ \begin{array}{l} \frac{c}{b} = -1 + \log r \\ \frac{a}{b} = \frac{\log r}{r} \Rightarrow \frac{c}{a} = \frac{-1 + \log r}{\frac{\log r}{r}} \end{array} \right.$$

$$\frac{c}{a} = \frac{\log r - \log 1}{\frac{1}{r} \log r} = \frac{\log \frac{r}{1}}{\frac{1}{r} \log r} = \frac{\log \frac{1}{a}}{\frac{1}{r} \log r} = \frac{\log \frac{1}{a}}{\log \sqrt{r}} = \log \frac{1}{\sqrt{r}} = \frac{c}{a}$$

$$\left(\frac{1}{\sqrt{r}}\right)^{\log \frac{1}{\sqrt{r}}} = \left(\frac{1}{a}\right)^{\log \frac{1}{r}} \Rightarrow \left(\frac{1}{a}\right)^{-\epsilon} \Rightarrow \boxed{\epsilon \sqrt{a}} \quad \text{بسط و جداسازی}$$