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نام و نام خانوادگی علی جالی پاسخنامه تشریحی تکلیف شماره کلاس پاس...

$$m = n^a$$

$$b = \log_{n^{a+1}} n^{a+1} = \frac{a+1}{a+1} > 1 \Leftrightarrow a > 0 \quad \left. \begin{array}{l} \frac{a+1}{a+1} < 2 \end{array} \right\} [b] = 1 \quad \checkmark$$

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الف) $\frac{x}{\log x} \geq 0 \quad (1) \quad \log \frac{x}{\log x} > 0 \Rightarrow \log x > 0 \Rightarrow x > 1$

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به بنای سبب صفر و یک به معنای دو
عوض میکنم!

$$x^2 - x - 2 > 0 \quad \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} = \frac{1 \pm \sqrt{1+8}}{2} = \frac{1 \pm 3}{2} = 2, -1$$

$$x^2 - 1 \geq 0 \Rightarrow x \geq 1 \quad (II) \quad 1 \leq \sqrt{x^2 - 1} + 1 \neq 0 \quad D_f = I \cap II = (-\infty, -1) \cup (2, +\infty) \quad \checkmark$$

$$2 \log_{\frac{a}{p}} + \log_{\frac{a}{q}} = -\log_{\frac{a}{p}} + \log_{\frac{a}{q}} = 2 \quad \log_{\frac{a}{p}} = t \Rightarrow \log_{\frac{a}{q}} = \frac{1}{t}$$

$$t + \frac{1}{t} = 2 \Rightarrow t = 1 \Rightarrow \log_{\frac{a}{p}} = 1 \Rightarrow a = p \quad \checkmark$$

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$$\log 8 = \log 2 - \log 3 = \log 10 - \log 2 - \log 3 = 1 - 0,3 - 0,4 = 0,3$$

$$\log 9 = 2 \log 3 = 0,8$$

$$\log 18 = \log 2 + \log 9 = \log 2 + \log 10 - \log 3 = 0,3 + 1 - 0,3 = 1$$

$$0,3x^2 + 0,8x - 1 = 0 \quad \frac{\sqrt{\Delta}}{|a|} = \frac{\sqrt{0,64 + 1,2}}{0,3} = \frac{\sqrt{1,84}}{0,3} = \frac{1,4}{0,3} = \frac{14}{3} \quad \checkmark$$

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$$\log_{15} 10 = \frac{\log 10}{\log 15} = \frac{\log 2 + \log 5}{\log 2 + \log 3} = \frac{\log 2 + 2 \log 2}{\log 2 + 2 \log 3} = \frac{\log 2 \cdot 3}{\log 2 \cdot 3 \cdot 2} = \frac{15}{12} \quad \checkmark$$

$$\frac{\log 3}{\log 2} = 2,1 \Rightarrow \log 3 = 2,1 \log 2$$

$$\frac{\log 2}{\log 5} = 0,5 \Rightarrow \log 5 = \frac{\log 2}{0,5} = 2 \log 2$$

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$$\log_{10}^4 = \frac{\log 4}{\log 10} = \frac{\log 2 + \log 2}{\log 2 + \log 2} = \frac{\log 2 + \frac{\log 2}{1.4}}{\log 2 + 1.0 \log 2} = \frac{1 + \frac{1}{1.4}}{1 + 1.0} = \frac{\frac{1.4}{1.4} + \frac{1}{1.4}}{2.4} = \frac{2.4}{2.4} = 1.0 \quad \checkmark$$

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$$\frac{\log 2}{\log 2} = 1.0$$

$$\frac{\log 2}{\log 2} = 1.4$$

$$A^m = n \Rightarrow y^m = y \cdot y \Rightarrow y^{\frac{m-1}{y}} = y$$

$$\log_{y^y} y^y = \log_{y^y} y^{\frac{m-1}{y}} = \frac{y + \frac{m-1}{y}}{y} = \frac{y + \frac{m-1}{y}}{y} = \frac{y^2 + m - 1}{y^2} = \frac{y^2 + m}{y^2} = \frac{y}{y(m+1)} \quad \checkmark$$

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$$(yf)^{yx-1} = \left(\frac{1000}{ff}\right)^{x^y} = ((0.1)^{-y})^{x^y}$$

$$\Rightarrow yx-1 = -yx^y \Rightarrow x=-1, x=\frac{1}{y}$$

$$x=-1 \Rightarrow 9x+1 < 0$$

$$\log_{\frac{9}{10}} \frac{9}{10} + 1 = \log_{\frac{9}{10}} \frac{9}{10} = \log_{\frac{9}{10}} \frac{9}{10} = \frac{1}{\frac{9}{10}} \quad \checkmark$$

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$$b = A^{\frac{y}{w}} (1+a) = y^{y(1+a)} \Rightarrow b = y^y \times (y^a)^y = 5 \cdot 9 = 45 \quad \checkmark$$

$$y^a = 9$$

$$yb-1 = 5 \cdot 45 - 1 = 224 \Rightarrow \log_{yb-1} = \log_{224} = \frac{1}{224} \quad \checkmark$$

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$$-\frac{a}{a} = -\frac{(1-fa)}{b} = \frac{fa}{b} = \log f \Rightarrow a = \frac{b \log f}{f} = b \frac{\log y}{y}$$

$$b+c = ya \Rightarrow c = b \log y - b = b(\log y - 1)$$

$$\left(\frac{1}{\sqrt{y}}\right)^{\frac{f}{y}} = \left(y^{\frac{1}{y}}\right)^{\frac{y(\log y - 1)}{y}} = y^{\frac{1 - \log y}{f \log y}} = y^{\frac{\log 2}{\log 14}} = y^{\log_{14} 2} = 2 \quad \checkmark$$

(1, 1/2)