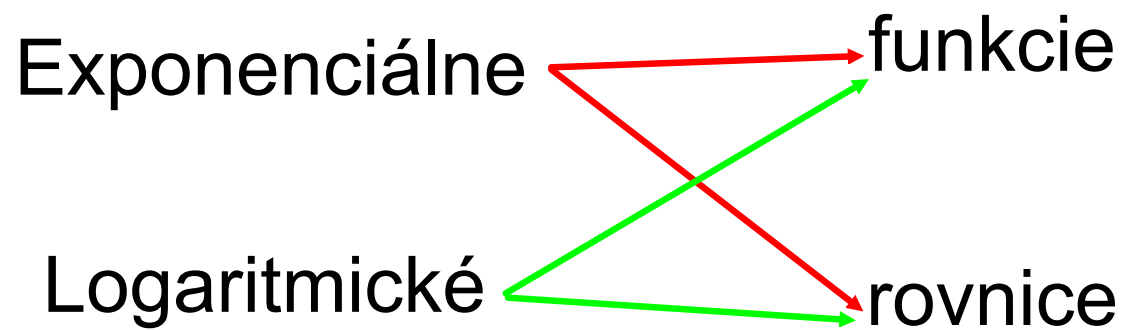


Opakovanie k 1. písomnej práci



Na základe grafu exponenciálnej funkcie určte, či je dané číslo väčšie ako 1, menšie ako 1 alebo rovné 1:

$$0,3^{12}$$

$$2,4^{-3}$$

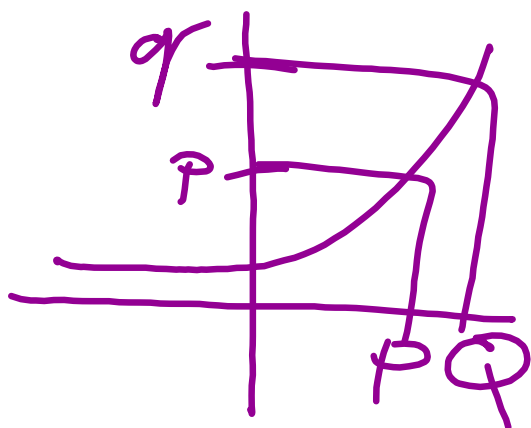
$$5,1^0$$

,

Určte vzťah medzi p a q tak, aby platilo:

$$p < q$$

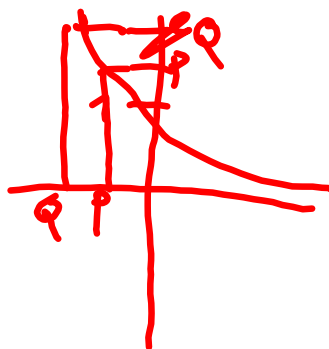
$$2,1^p < 2,1^q$$



1

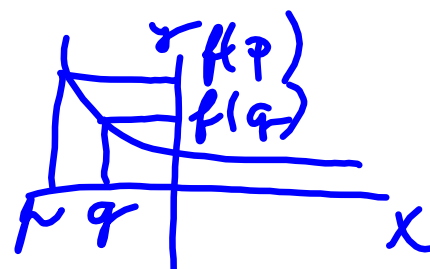
$$p > q$$

$$0,5^p < 0,5^q$$



$$q > p$$

$$\left(\frac{3}{4}\right)^p > \left(\frac{3}{4}\right)^q$$



1

Na základe grafu logaritmickej funkcie určte, či je dané číslo väčšie ako 0, menšie ako 0 alebo rovné 0:

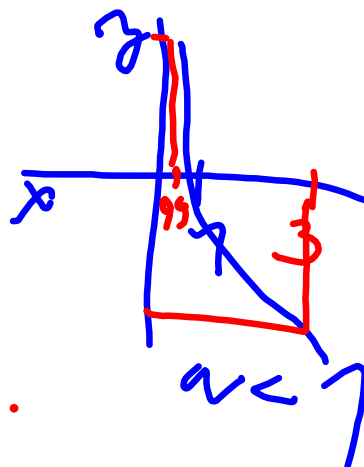
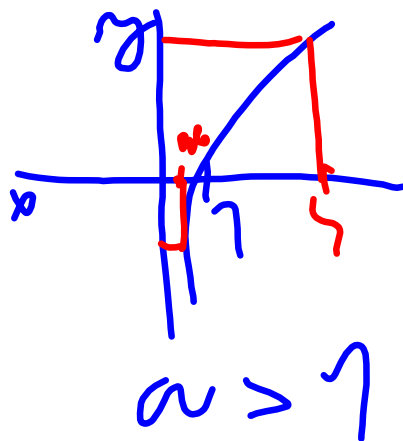
$$y = \log_a x$$

$$\log_2 4 > 0$$

$$\log_3 0,6 < 0$$

$$\log_{0,1} 0,9 > 0$$

$$\log_{0,9} 3 < 0$$

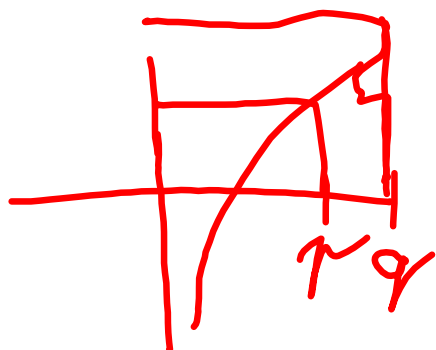


1

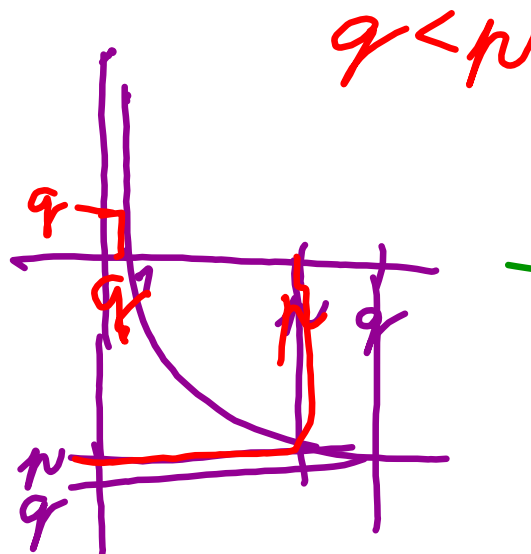


Určte vzťah medzi p a q tak, aby platilo:

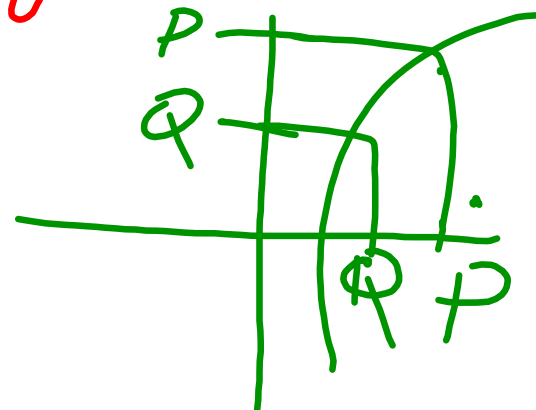
$q > p$
 $\log_4 p < \log_4 q$



$\log_{0,5} p < \log_{0,5} q$



$P > Q$
 $\log_{10} p > \log_{10} q$



Riešte v R rovnice:

$$\begin{aligned}
 & 3^{x+1} = 3^x \cdot 3^1 \quad x = a \\
 & 4 \cdot 3^{x+1} - 72 = 3^{x+2} + 3^{x-1} \\
 & 4 \cdot 3^x \cdot 3 - 72 = 3^x \cdot 9 + 3^x \cdot \frac{1}{3} \\
 & 4 \cdot a \cdot 3 - 72 = a \cdot 9 + a \cdot \frac{1}{3} \\
 & 12a - 72 = 9a + \frac{1}{3}a \quad / \cdot 3 \\
 & 36a - 216 = 27a + a \\
 & 8a = 216 \\
 & a = 27 \\
 & 3^x = 3^3 \\
 & x = 3
 \end{aligned}$$

$$3 = 27$$

$$\begin{aligned}
 & 2^{4x-6} \cdot 2^{4x-4} = 2^{3x-1} \cdot 2^{3x+1} \\
 & 2^{(4x-6)+(4x-4)} = 2^{(3x-1)+(3x+1)} \\
 & 2^{(8x-10)} = 2^{(6x)} \\
 & 8x-10 = 6x \quad / -6x; +10 \\
 & 8x-6x = 10 \\
 & 2x = 10 \\
 & \underline{\underline{x = 5}}
 \end{aligned}$$

$$2 = 3^5$$

..

Určte číslo x tak, aby platilo:

$$\log_3 x = -4$$

$$\frac{3^{-4}}{1} = x$$

$$\frac{1^4}{3^4} = x$$

$$x = \frac{1}{81}$$

$$\log_x 8 = 1$$

$$x^1 = 8^1$$

$$x = 8$$

$$\log_5 125 = x$$

$$5^x = 125$$

$$5^x = 5^3$$

$$x = 3$$

$$\log_3(4x + 6) - \log_3(2x - 1) \neq 1$$

$$\begin{aligned}\log_3 12 - \log_3 4 &= \log_3 \frac{12}{4} \\ &= \log_3 3 = 1\end{aligned}$$

2

1 1 1

⋮

$$\log (x + 1) - \log (x^2 - 1) = 1 - \log (x + 1)$$