LOGARITMICKÉ A EXPONENCIÁLNÍ NEROVNICE

Řešte v $\mathcal{R}$:

5.1.P.1 :	$2^{3x-4} \geq 1$	$K = \langle \frac{4}{3}; \infty)$
5.1.P.2 :	$\left(\frac{1}{7}\right)^{3x} < 1$	$K = (0; \infty)$
5.1.P.3 :	$2^{x+1} > 16$	$K = (3; \infty)$
5.1.P.4 :	$9^{\frac{4}{x}} < \sqrt{3}$	$K = (-\infty; 0) \cup (16; \infty)\,; D : \boxed{x \neq 0}$
5.1.P.5 :	$3^{x+4} > 3^{1-x}$	$K = \left(-\infty; -\frac{3}{2}\right)$
5.1.P.6 :	$2^{3x+5} - 4^{x-1} > 0$	$K = (-7; \infty)$
5.1.P.7 :	$6^{4x+1} - 6 > 1290$	$K = \left(\frac{3}{4}; \infty\right)$
5.1.P.8 :	$10^{x^2-5x} < 0,1^6$	$K = (2; 3)$
5.1.P.9 :	$\left(\frac{2}{3}\right)^{x^2} > \left(\sqrt{\frac{3}{2}}\right)^x$	$K = \left(-\frac{1}{2}; 0\right)$
5.1.P.10 :	$\left(\frac{1}{3}\right)^{\frac{1+x}{1-x}} > 243$	$K = \left(1; \frac{3}{2}\right)\,; D : \boxed{x \neq 1}$
5.1.P.11 :	$\left(\frac{1}{4}\right)^{\frac{3x^2-1}{2}} \leq \left(\frac{1}{8}\right)^{\frac{x+1}{3}}$	$K = \left(-\infty; -\frac{2}{3}\right\rangle \cup \langle 1; \infty)$
5.1.P.12 :	$\left(\frac{4}{9}\right)^{x+1} \leq \left(\frac{2}{3}\right) \cdot \left(\frac{8}{27}\right)^x$	$K = (-\infty; 1\rangle$
5.1.P.13 :	$0,25^{2-x} \geq 256 \cdot 2^{-x-3}$	$K = \langle 3; \infty)$

5.4.P.1 :	$4^x - 3 \cdot 2^x < 4$	$K = (-\infty; 2)$
5.4.P.2 :	$4^x - 12 \cdot 2^x + 32 \leq 0$	$K = \langle 2; 3\rangle$
5.4.P.3 :	$4^{-x+\frac{1}{2}} - 7 \cdot 2^{-x} - 4 < 0$	$K = (-2; \infty)$
5.4.P.4 :	$2^x - 4 \cdot 4^{x-1} > 4^{-1} - 2^{x-2}$	$K = (-2; 0)$
5.4.P.5 :	$\left(\frac{1}{2}\right)^x - \left(\frac{1}{2}\right)^{1-x} \geq 1$	$K = (-\infty; -1\rangle$
5.4.P.6 :	$\frac{2^{1-x} - 2^x + 1}{2^x - 1} \leq 0$	$K = (-\infty; 0) \cup \langle 1; \infty)\,; D : \boxed{x \neq 0}$

6.4.P.1 :	$\frac{\log x + 1}{\log x - 2} < 0$	$K = (0,1; 100)\,; \mathcal{D} : \boxed{x \in (0; 100) \cup (100; \infty)}$
6.4.P.2 :	$\frac{2 - \log x}{\log x} > 1$	$K = (1; 10)\,; \mathcal{D} : \boxed{x \in (0; 1) \cup (1; \infty)}$
6.4.P.3 :	$\frac{1}{\log x} + \frac{1}{3} \geq 0$	$K = (0; 0,001) \cup (1; \infty)\,; \mathcal{D} : \boxed{x \in (0; 1) \cup (1; \infty)}$
6.4.P.4 :	$\frac{1}{\log x} + \frac{1}{1 - \log x} > 1$	$K = (1; 10)\,; \mathcal{D} : \boxed{x \in (0; 1) \cup (1; 10) \cup (10; \infty)}$
6.4.P.5 :	$\log_2 x \geq \frac{2}{\log_2 x - 1}$	$K = \left(0; \frac{1}{2}\right\rangle \cup (2; 4\rangle\,; \mathcal{D} : \boxed{x \in (0; 2) \cup (2; \infty)}$
6.4.P.6 :	$\frac{1 - \log_4 x}{1 + \log_2 x} \leq 1$	$K = \left(0; \frac{1}{2}\right) \cup \langle \sqrt{2}; \infty)\,; \mathcal{D} : \boxed{x \in \left(0; \frac{1}{2}\right) \cup \left(\frac{1}{2}; \infty\right)}$

6.1.P.1 :	$\log(3x+1) \leq 1$	$K = \left(-\frac{1}{3}; 3\right\rangle\,; \mathcal{D} : \boxed{x \in \left(-\frac{1}{3}; \infty\right)}$
6.1.P.2 :	$\log_2(x+2) > 3$	$K = (6; \infty)\,; \mathcal{D} : \boxed{x \in (-2; \infty)}$
6.1.P.3 :	$\log_3(x+4) \leq 4$	$K = (-4; 77\rangle\,; \mathcal{D} : \boxed{x \in (-4; \infty)}$
6.1.P.4 :	$\log_{\frac{1}{2}}(2x+4) \geq -3$	$K = (-2; 2\rangle\,; \mathcal{D} : \boxed{x \in (-2; \infty)}$
6.1.P.5 :	$\log_5(x+2) < 1$	$K = (-2; 3)\,; \mathcal{D} : \boxed{x \in (-2; \infty)}$
6.1.P.6 :	$\frac{3 + 2\log x}{3} \leq 5$	$K = (0; 10^6\rangle\,; \mathcal{D} : \boxed{x \in (0; \infty)}$
6.1.P.7 :	$\log_3\left(x^2 - 1\right) \geq 1$	$K = \langle -2; -1) \cup (1; 2\rangle\,;$ $\mathcal{D} : \boxed{x \in (-\infty; -1) \cup (1; \infty)}$
6.1.P.8 :	$\log_5\left(x^2 - 2x + 1\right) \geq 0$	$K = (-\infty; 0\rangle \cup \langle 2; \infty)\,; \mathcal{D} : \boxed{x \neq 1}$
6.1.P.9 :	$\log_{\frac{4}{7}}\left(4x^2 + 3x\right) > 0$	$K = \left(-1; -\frac{3}{4}\right) \cup \left(0; \frac{1}{4}\right)\,;$ $\mathcal{D} : \boxed{x \in \left(-\infty; -\frac{3}{4}\right) \cup (0; \infty)}$
6.1.P.10 :	$\log\left(x^2 - 4x + 13\right) < 1$	$K = (1; 3)\,; \mathcal{D} : \boxed{x \in R}$
6.1.P.11 :	$\log_8\left(x^2 - 4x + 3\right) < 1$	$K = (-1; 1) \cup (3; 5)\,;$ $\mathcal{D} : \boxed{x \in (-\infty; 1) \cup (3; \infty)}$
6.1.P.12 :	$\log \frac{x-2}{x+3} < 0$	$K = (2; \infty)\,; \mathcal{D} : \boxed{x \in (-\infty; -3) \cup (2; \infty)}$
6.1.P.13 :	$\log \frac{3x+1}{x+1} \leq -1$	$K = \left(-\frac{1}{3}; -\frac{1}{5}\right\rangle\,;$ $\mathcal{D} : \boxed{x \in (-\infty; -1) \cup \left(-\frac{1}{3}; \infty\right)}$
6.1.P.14 :	$\log_{\frac{1}{3}} \frac{3x-1}{x+2} < 1$	$K = (-\infty; -2) \cup \left(\frac{5}{8}; \infty\right)\,;$ $\mathcal{D} : \boxed{x \in (-\infty; -2) \cup \left(\frac{1}{3}; \infty\right)}$

6.1.P.15 :	$\log_2 \log_3 (2x-1) > 0$	$K = (1; \infty)\,; \mathcal{D} : \boxed{x \in (1; \infty)}$
6.1.P.16 :	$\log_2\left(1 + \log_{\frac{1}{9}} x - \log_9 x\right) < 1$	$K = \left(\frac{1}{3}; 3\right)\,; \mathcal{D} : \boxed{x \in (0; 3)}$
6.1.P.17 :	$\log_x 2 > 1$	$K = (1; 2)\,; \mathcal{D} : \boxed{x \in R^+ - \{1\}}$
6.1.P.18 :	$\log_x 5 < -2$	$K = \left(\frac{\sqrt{5}}{5}; 1\right)\,; \mathcal{D} : \boxed{x \in R^+ - \{1\}}$
6.1.P.19 :	$\log_x\left(x^3 - x^2 - 2x\right) < 3$	$K = (2; \infty)\,; \mathcal{D} : \boxed{x \in (2; \infty)}$
6.1.P.20 :	$\log_{2x}\left(x^2 - 5x + 6\right) < 1$	$K = \left(0; \frac{1}{2}\right) \cup (1; 2) \cup (3; 6)\,;$ $\mathcal{D} : \boxed{x \in \left(0; \frac{1}{2}\right) \cup \left(\frac{1}{2}; 2\right) \cup (3; \infty)}$
6.1.P.21 :	$\log_{2x-3} x > 1$	$K = (3; 5)\,; \mathcal{D} : \boxed{x \in \left(\frac{3}{2}; 2\right) \cup (2; \infty)}$
6.1.P.22 :	$\log_{\frac{x-1}{x+5}} 0,3 > 0$	$K = (1; \infty)\,; \mathcal{D} : \boxed{x \in (-\infty; -5) \cup (1; \infty)}$
6.1.P.23 :	$\log_{\frac{1}{4}}(2-x) > \log_{\frac{1}{4}} \frac{2}{x+1}$	$K = (-1; 0) \cup (1; 2)\,; \mathcal{D} : \boxed{x \in (-1; 2)}$
6.1.P.24 :	$\log_{0,5}\left(x^2 - x - 12\right) > \log_{0,5}(x+3)$	$K = (4; 5)\,; \mathcal{D} : \boxed{x \in (4; \infty)}$
6.1.P.25 :	$\log(x+3) > \frac{1}{2}\log(x+5)$	$K = (-1; \infty)\,; \mathcal{D} : \boxed{x \in (-3; \infty)}$
6.1.P.26 :	$\log \frac{6}{x} > \log(x+5)$	$K = (0; 1)\,; \mathcal{D} : \boxed{x \in (0; \infty)}$
6.1.P.27 :	$\log(x+2) < 2 - \log(2x-6)$	$K = (3; \infty)\,; \mathcal{D} : \boxed{x \in (3; \infty)}$
6.1.P.28 :	$\log(x-4) + \log(x-2) > 1$	$K = \left(3 + \sqrt{11}; \infty\right)\,; \mathcal{D} : \boxed{x \in (4; \infty)}$
6.1.P.29 :	$\log_{\frac{1}{2}}(x-2) \leq -2 - \log_{\frac{1}{2}}(x+2)$	$K = \left\langle 2\sqrt{2}; \infty\right)\,; \mathcal{D} : \boxed{x \in (2; \infty)}$
6.1.P.30 :	$\log_5(x-3) + \frac{1}{2}\log_5 3 < \frac{1}{2}\log_5\left(2x^2 - 6x + 7\right)$	$K = (3; 10)\,; \mathcal{D} : \boxed{x \in (3; \infty)}$