

17. Logaritmické rovnice

Řešte logaritmické rovnice v \mathbb{R}^+ :

1. $\log(1 - 2x) = 1$ $P = \{-4,5\}$
2. $\log(x - 1)^2 = 0$ $P = \{0; 2\}$
3. $\log_9(x^2 - 1) = 1$ $P = \{\sqrt{10}; -\sqrt{10}\}$
4. $\log_3\left(\frac{2}{3}x - \frac{1}{4}\right) = 0$ $P = \left\{\frac{15}{8}\right\}$
5. $\log_3(1 - x) = \log_3(x + 16 - x^2)$ $P = \{-3\}$
6. $2 - \log_{10} 5 = \log_{10} x$ $P = \{20\}$
7. $\log(x - 4) + \log(x - 19) = 3 - 2\log 2$ $P = \{29\}$
8. $\log_2(y + 2) + \log_2(y + 14) = 6$ $P = \{2\}$
9. $(\log x)^2 + 2\log x - 3 = 0$ $P = \{10; 10^{-3}\}$
10. $(\log_5 x)^2 - 2\log_5 x = -1$ $P = \{5\}$
11. $\log x + \frac{1}{\log x} = 2$ $P = \{10\}$
12. $\log(x + 2) - \log(x - 1) = 2 - \log 4$ $P = \left\{\frac{9}{8}\right\}$
13. $2^x = 100$ $P = \{6,64\}$
14. $5^{x-2} = \frac{10}{3}$ $P = \{2,75\}$