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Príklady: Exponenty a logaritmy
Exercises for exponents and logarithms

1) SK: Nakresli grafy funkcií a grafy ich inverzných funkcií (EN: Draw the graphs of the given functions and the graphs of their corresponding inverse functions):

   (a) $f : y = \log_{0.5}(x - e) + 3$

   (b) $f : y = \left(\frac{1}{3}\right)^{x+2} - 1$

   (c) $f : y = |2^{x+1} - 5|$

2) SK: Urči definičný obor funkcií v $\mathbb{R}$ (EN: Determine the domain of the given functions in $\mathbb{R}$):

   (a) $f : y = \dfrac{1}{\log^2(x+1)}$

   (b) $f : y = \sqrt{\log(\log x)}$

   (c) $f : y = \log(\sqrt{x^2 + 2})$

3) SK: Riešte v $\mathbb{R}$: (EN: Solve for x in $\mathbb{R}$)

   (a) $\left(\dfrac{3}{4}\right)^{x-1} \cdot \sqrt{\left(\dfrac{4}{3}\right)^{x}} = \dfrac{9}{16}$

   (b) $\log_{\frac{1}{3}}(3 - x) \geq -3$

   (c) $\log_3 x = 5 - \dfrac{4}{\log_3 x}$

4) SK: Vyjadri inverzné funckie daných funkcií (EN: Express the inverse functions):

   (a) $f : y = \left(\frac{1}{2}\right)^{-x+3} - 2$

   (b) $f : y = \log_{\frac{1}{2}}(\frac{1}{2} + x) - 5$

   (c) $f : y = 2 - \frac{1}{2}\log_3(x + 1)$

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