

Definiční obor

$$f(x) = \sqrt{x^2 - 9} + \log \frac{x^2 - 2x - 35}{x^2 - 16}$$

I) odmocnina
 $x^2 - 9 \geq 0$

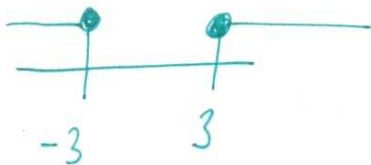
II) logaritmus
 $\frac{x^2 - 2x - 35}{x^2 - 16} > 0$

III) jmenovatel
 $x^2 - 16 \neq 0$

Nullstelle

Asymptote

$$|x| = 3$$



čitatel

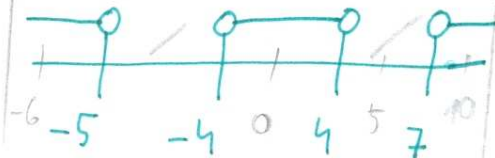
$$x^2 - 2x - 35 = 0$$

$$(x + 5)(x - 7) = 0$$

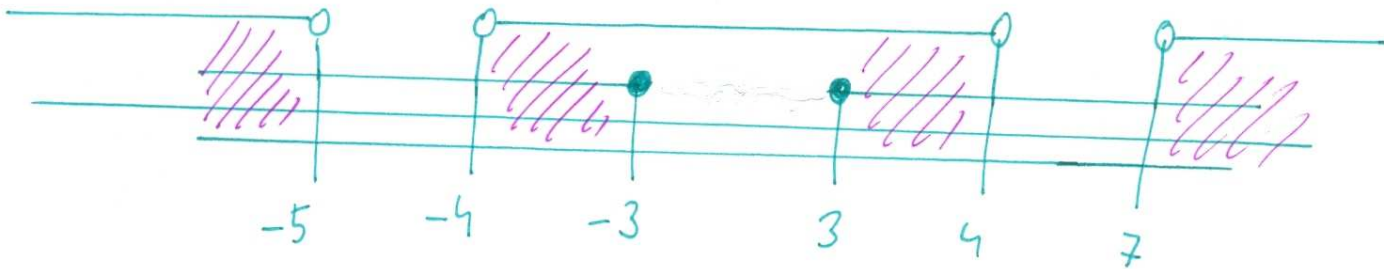
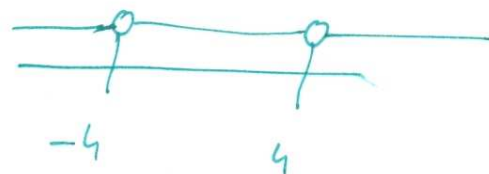
$$x_1 = -5 \quad x_2 = 7$$

jmenovatel

$$x_3 = \pm 4$$

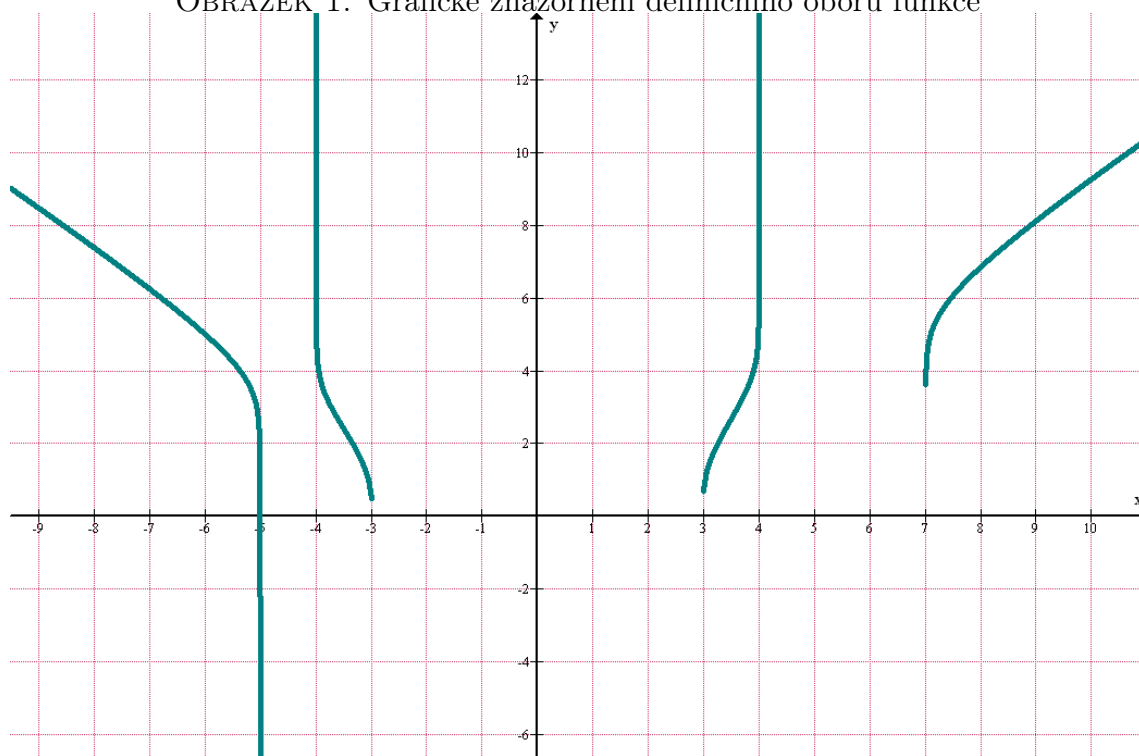


$$|x| = 4$$



$$x \in (-\infty; -5) \cup (-4; -3) \cup (3; 4) \cup (7; \infty)$$

OBRÁZEK 1. Grafické znázornění definičního oboru funkce



Zdroj: program Graph