

Definiční obor

$$f(x) = \sqrt{\frac{x^2 + 3x - 4}{x^2 - 9}} + \log(\log(2x + 15))$$

I) odmocnina

II) jmenovatel

III) 1. logaritmus

IV) 2. logaritmus

Jmenovatel

$$x^2 + 3x - 4$$

$$x^2 - 9 \neq 0$$

$$\log(2x + 15) > 0$$

$$2x + 15 > 0$$

nulové body

Jmenovatel

$$x^2 = 9$$

$$2x + 15 = 10^0$$

$$2x = -15$$

$$x^2 + 3x - 4 = 0$$

$$|x| = 3$$

$$2x = -14$$

$$x = -\frac{15}{2}$$

$$(x+4)(x-1) = 0$$

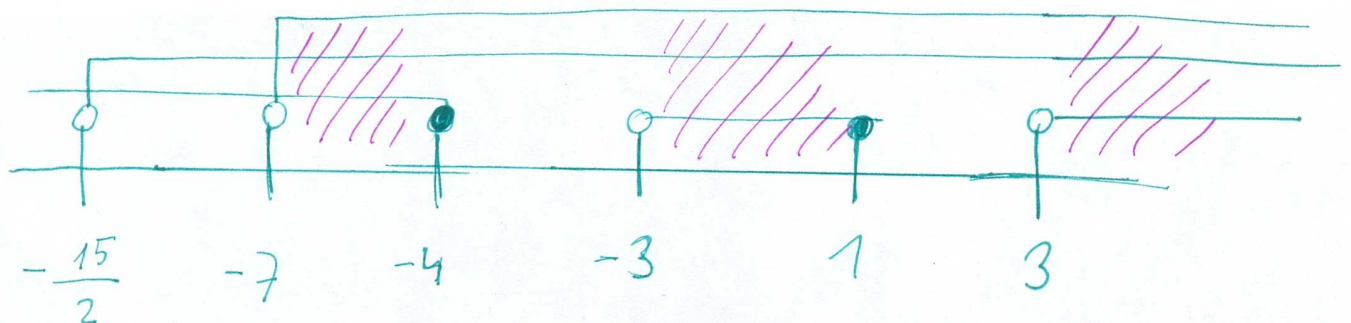
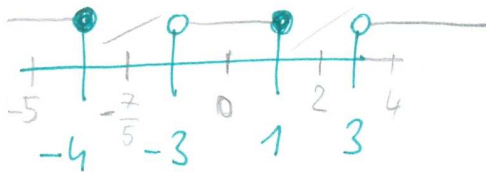
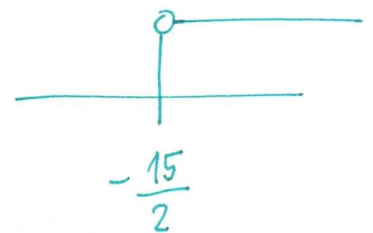
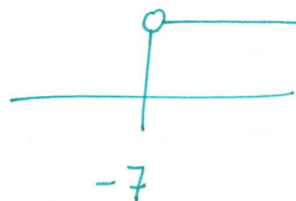
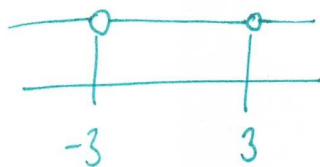
$$x = -4 \quad x = 1$$

$$x = -7$$

Jmenovatel

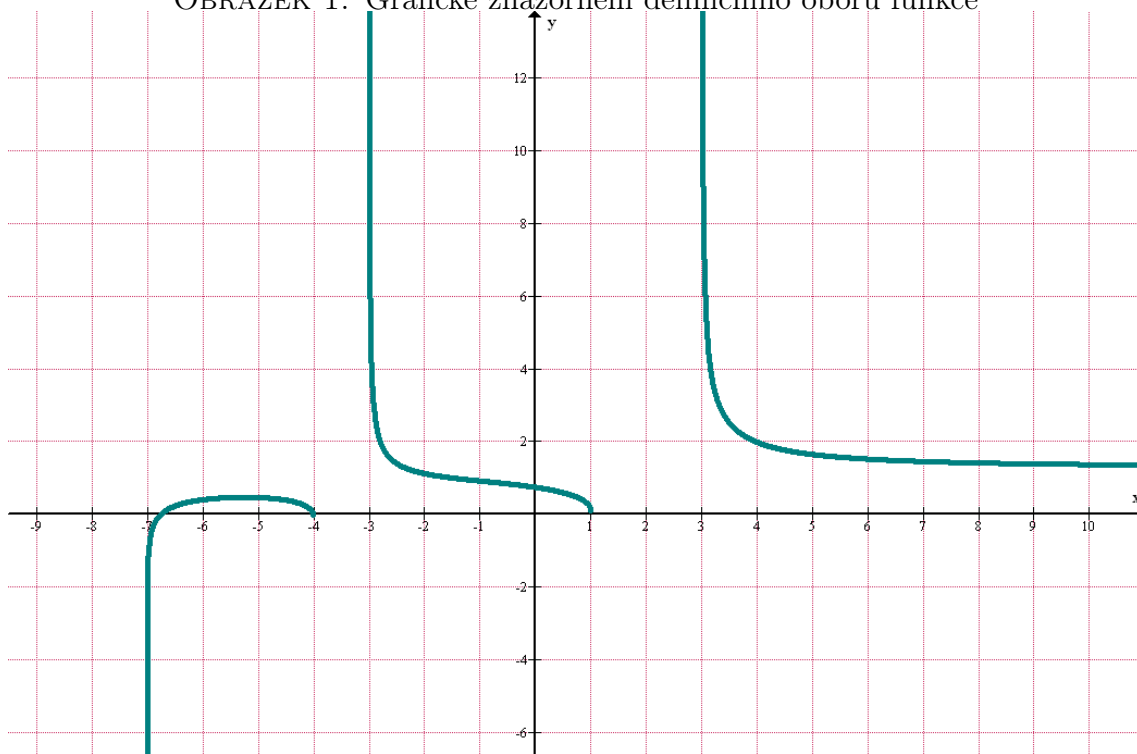
$$x^2 - 9 = 0$$

$$|x| = 3$$



$$x \in (-7; -4) \cup (-3; 1) \cup (3; \infty)$$

OBRÁZEK 1. Grafické znázornění definičního oboru funkce



Zdroj: program Graph