

Matematika 1 cvičení

0.1 Definiční obor

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

$$\frac{x^2 - 4x + 3}{x + 4} \geq 0 \rightarrow \frac{(x - 3)(x - 1)}{x + 4}$$

$$D(f) = (-4; 1) \cup (3; \infty)$$

$$f(x) = \frac{\ln(x^2 - 1)}{\ln(x + 4)}$$

$$D(f) = (-4; -3) \cup (-3; -2) \cup (1; \infty)$$

0.2 Grafy funkcí

funkce	D	H	Vlastnosti rostoucí, prostá, spojitá
$f(x) = 2x - 1$	$D_x = R$	$H_x = R$	
$g(x) = x^2 + 2x - 8$	$D_x = R$	$H_x = \langle -9; \infty \rangle$	—
$h(x) = \frac{(x-1)^5}{32} - 1$	$D_x = R$	$H_x = R$	—
$i(x) = \sqrt{2x - 4}$	$D_x = \langle 2; \infty \rangle$	$H_x = \langle 0; \infty \rangle$	—
$j(x) = \frac{3x+3}{3x+1}$	$D_x = (-\infty; -\frac{1}{3}) \cup (-\frac{1}{3}; \infty)$	$H_x = (-\infty; 1) \cup (1; \infty)$	—
$k(x) = (\frac{1}{3})^{x-2} - 3$	$D_x = R$	$H_y = (-3; \infty)$	—