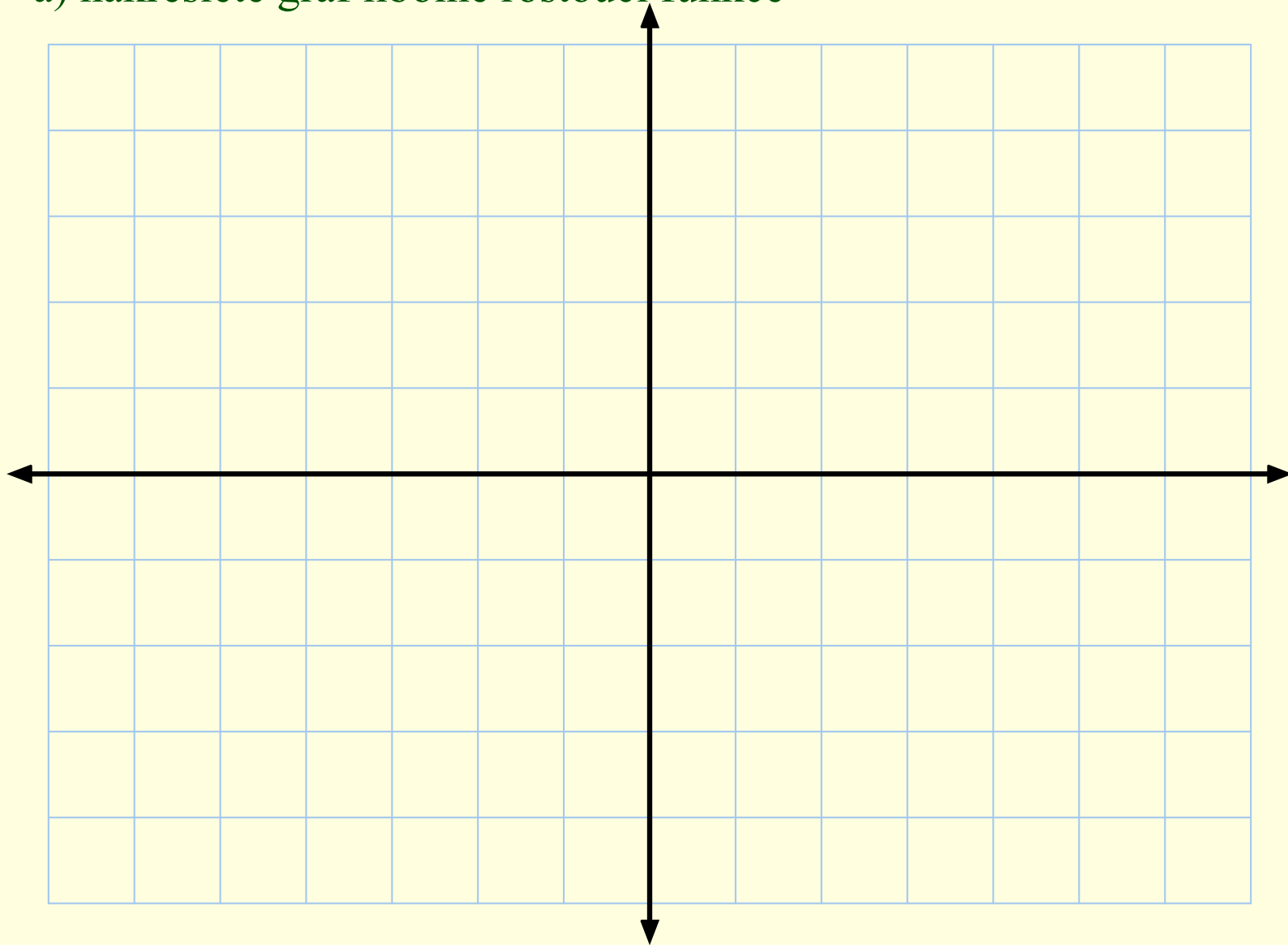


Monotónie funkce

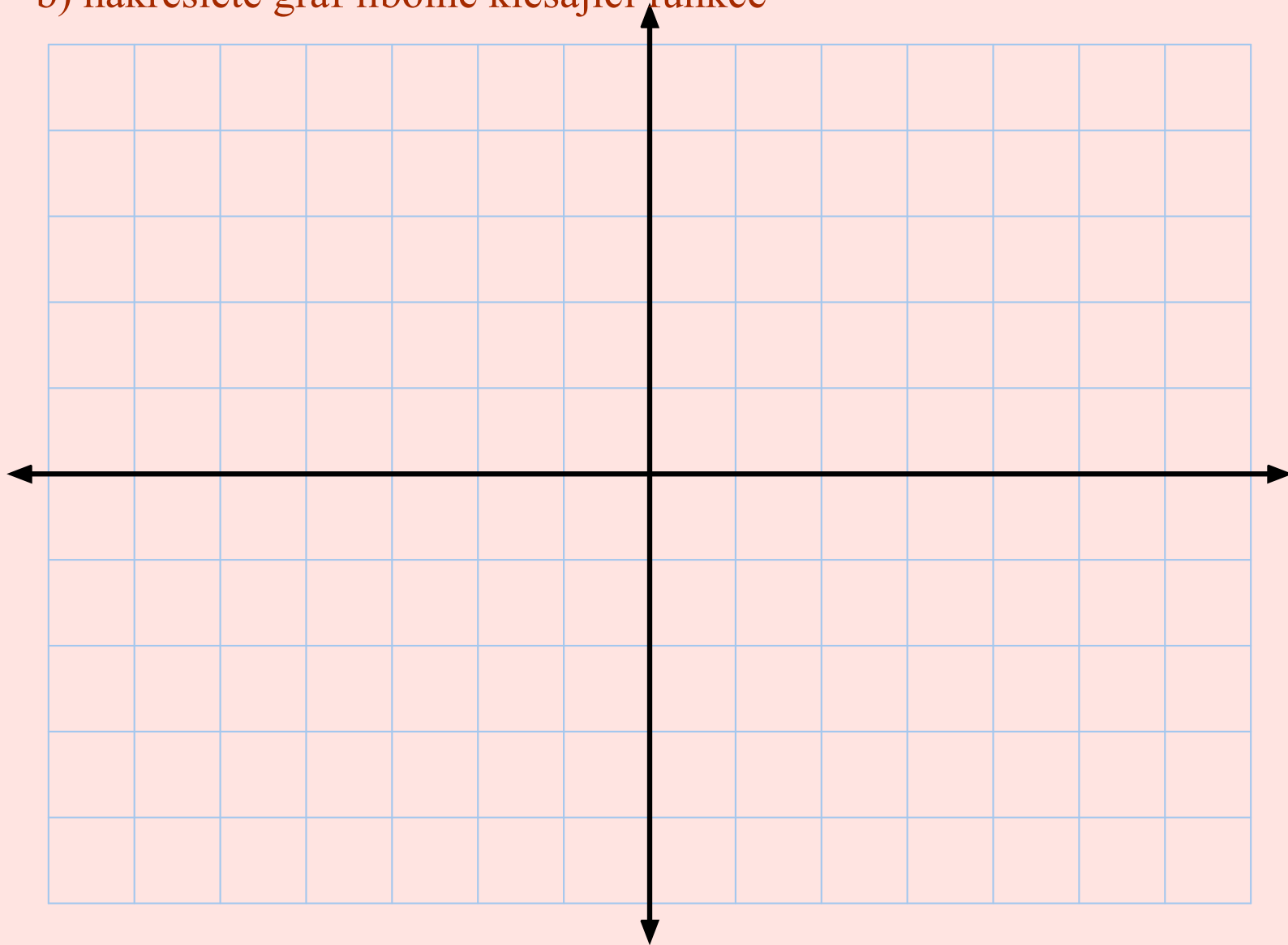
fce je rostoucí $\Leftrightarrow \forall x_1, x_2 \in D(f), x_1 < x_2 \Rightarrow f(x_1) < f(x_2)$

fce je klesající $\Leftrightarrow \forall x_1, x_2 \in D(f), x_1 < x_2 \Rightarrow f(x_1) > f(x_2)$

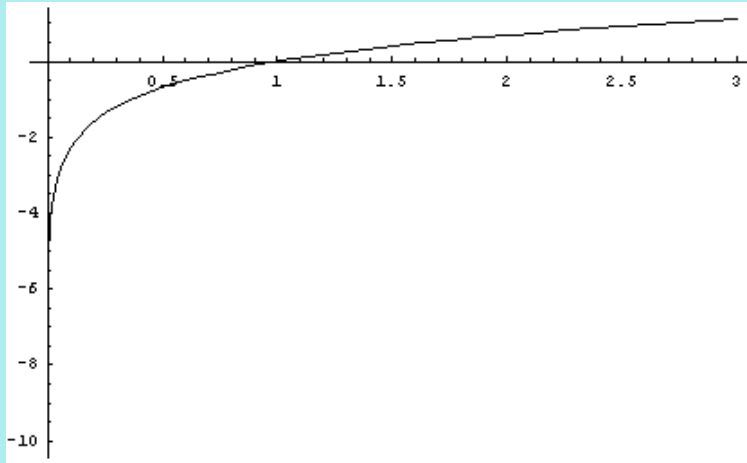
a) nakreslete graf libolné rostoucí funkce



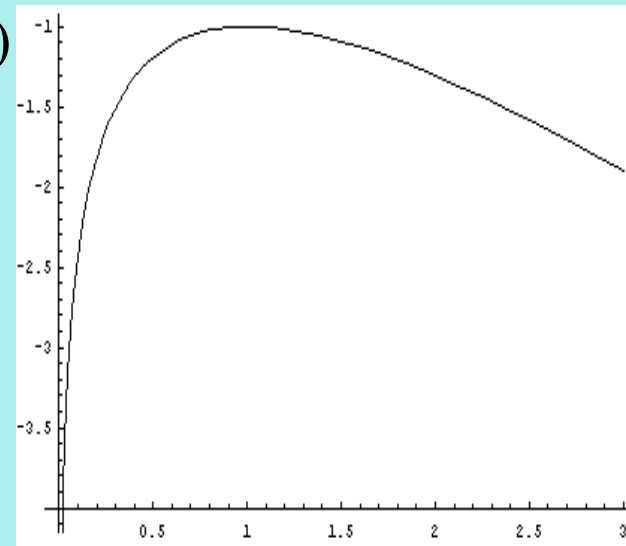
b) nakreslete graf libolné klesající funkce



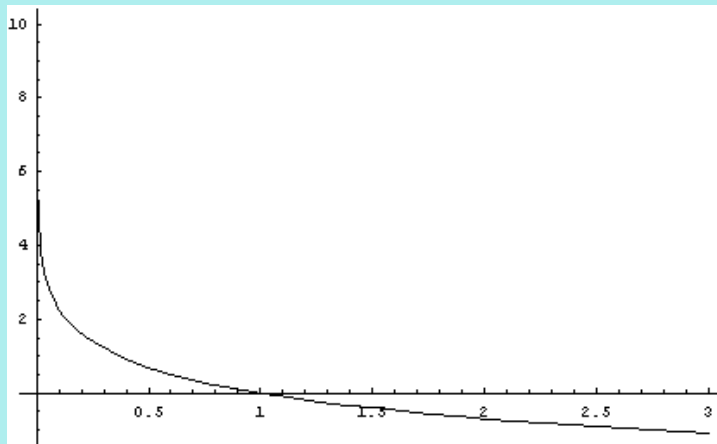
a)



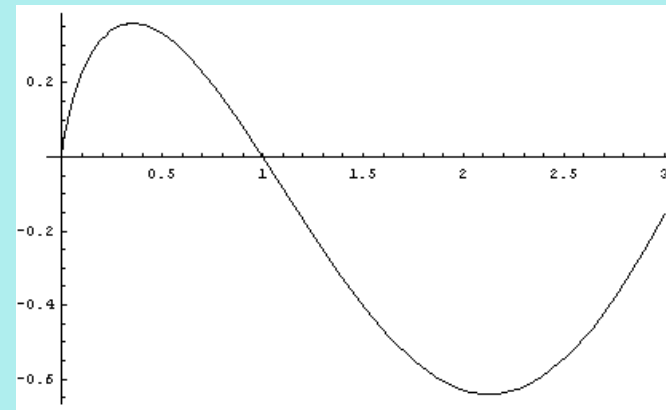
b)



c)



d)

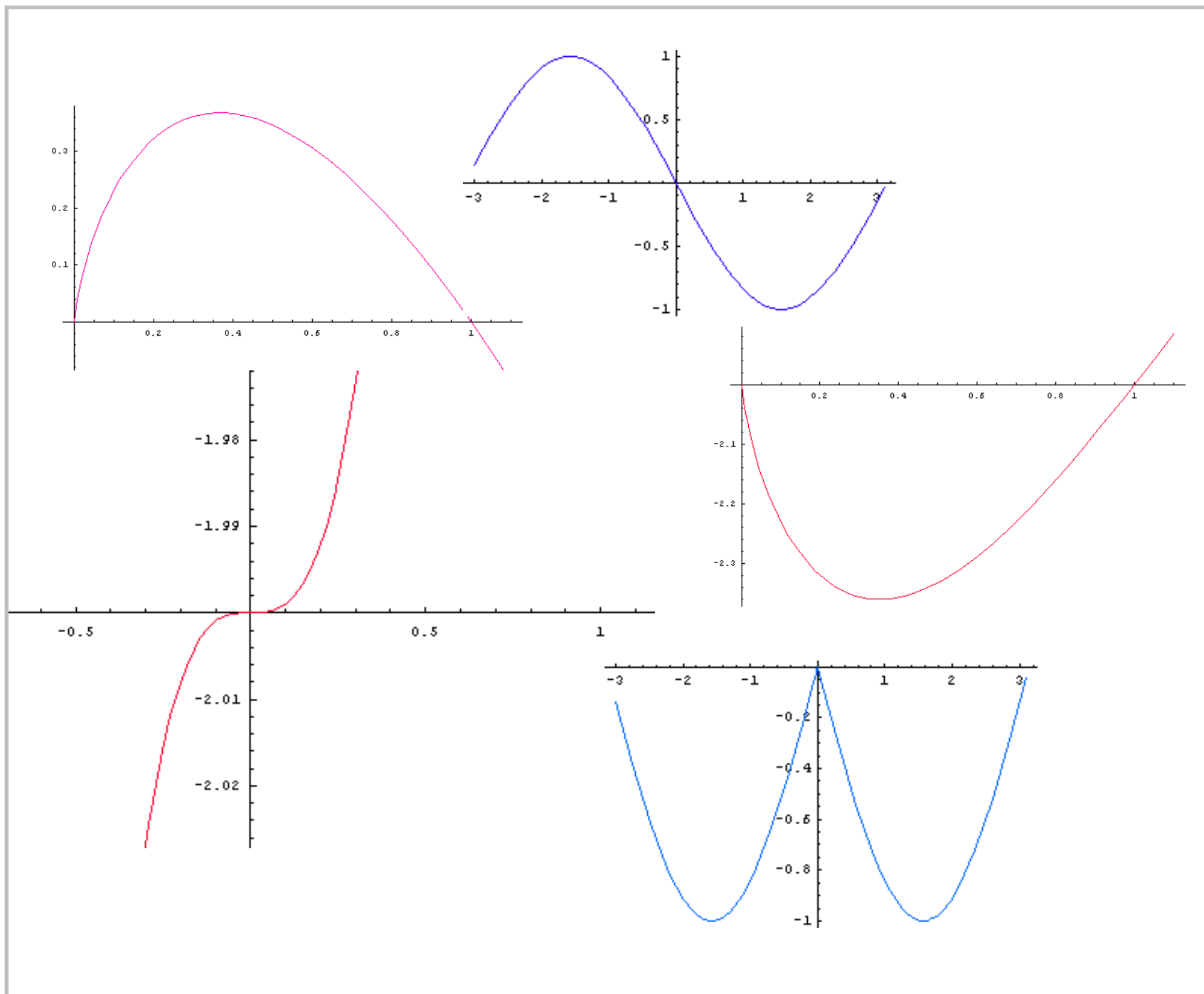


Omezená funkce

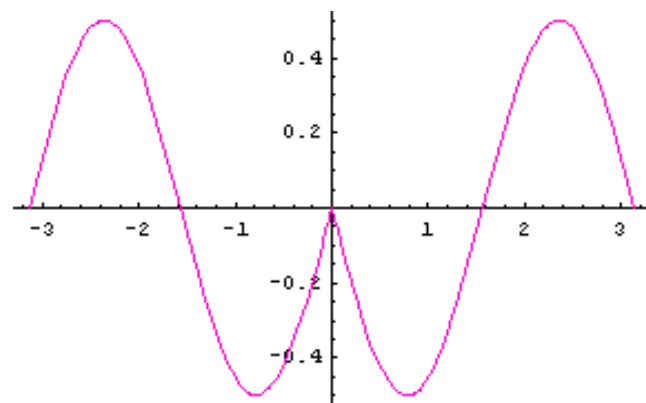
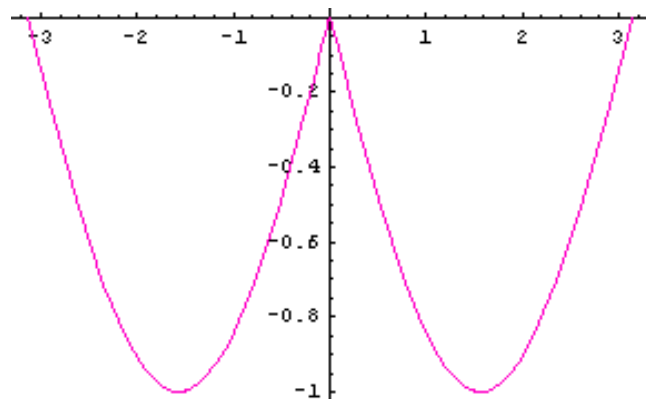
fce omezená zdola: $\exists m \in R; \forall x \in D(f); f(x) \geq m$

fce omezená shora: $\exists M \in R; \forall x \in D(f); f(x) \leq M$

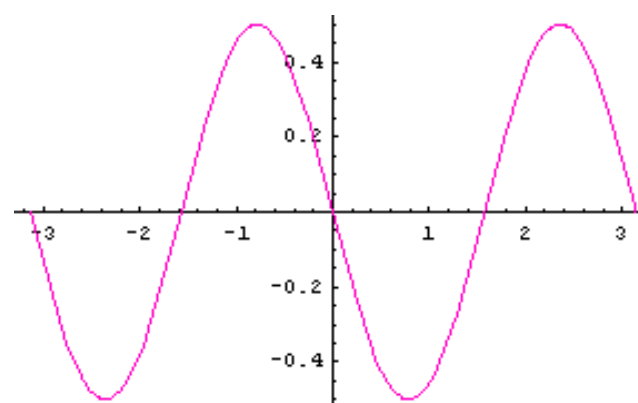
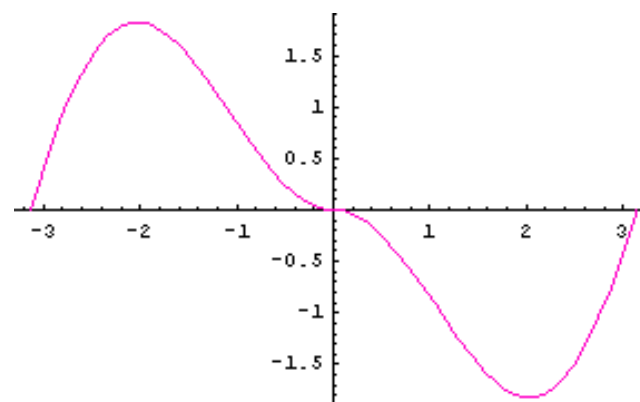
fce je omezená \iff je omezená shora i zdola



fce sudá



fce lichá

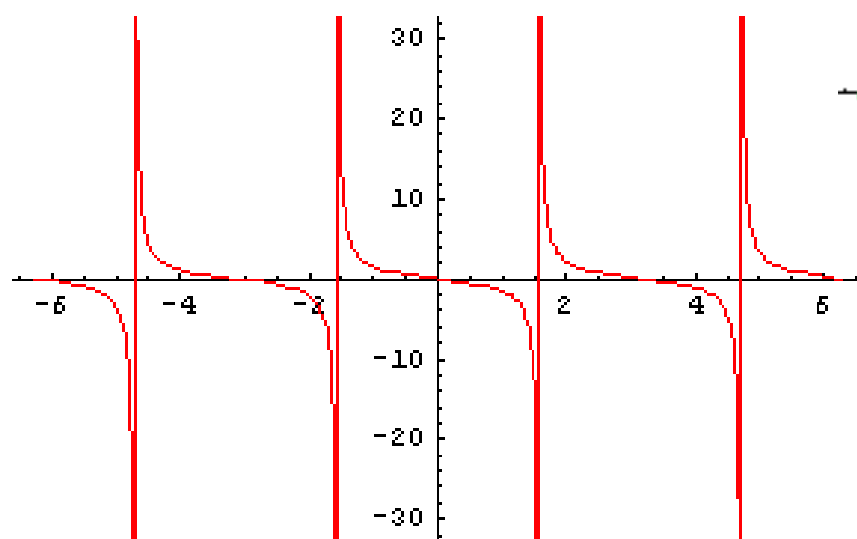
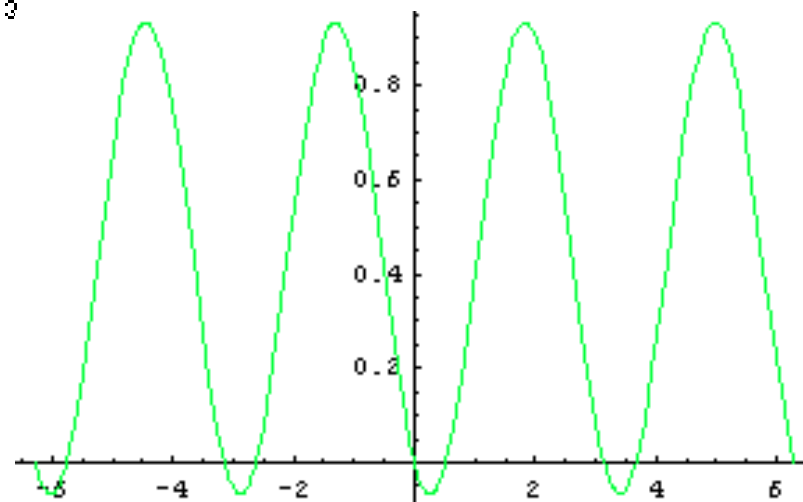
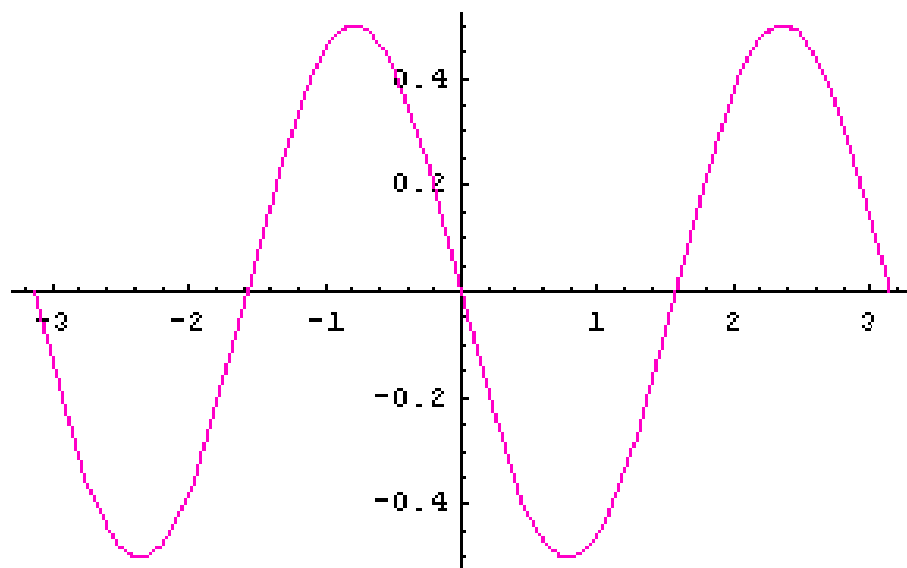


fce sudá \Leftrightarrow

- 1) $\forall x, x \in D(f) \Rightarrow -x \in D(f)$
- 2) $\forall x, f(-x) = f(x)$

fce lichá \Leftrightarrow

- 1) $\forall x, x \in D(f) \Rightarrow -x \in D(f)$
- 2) $\forall x, f(-x) = -f(x)$



fce periodická s periodou k \Leftrightarrow

$$\forall x \in D(f); f(x + k) = f(x)$$

fční hodnoty pro x , $x+k$, $x+2k$, $x+3k$ atd. jsou stejné tj. opakují se \Rightarrow jsou stejné

Určete všechny vlastnosti fci:

