# NEROVNICE V SÚČINOVOM A PODIELOVOM TVARE

- **V SÚČINOVOM TVARE**

a) $(x+2)(2x-1) \geq 0$

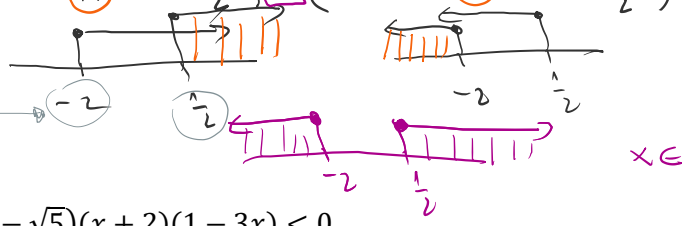
$x \in \langle -2; \frac{1}{2} \rangle$ ; $x \in \langle -2; \infty \rangle$ ; $x \in (-\infty; -2\rangle \cup \langle \frac{1}{2}; \infty)$

$x \in (-\infty; -2\rangle \cap \langle \frac{1}{2}; \infty) = \emptyset$

$x \in (-\infty; -2\rangle \cup \langle \frac{1}{2}; \infty)$

$(x+2 \geq 0 \wedge 2x-1 \geq 0) \vee (x+2 \leq 0 \wedge 2x-1 \leq 0)$

$(x \geq -2 \wedge x \geq \frac{1}{2}) \vee (x \leq -2 \wedge x \leq \frac{1}{2})$



$x \in (-\infty; -2\rangle \cup \langle \frac{1}{2}; \infty)$

b) $(x-\sqrt{5})(x+2)(1-3x) < 0$ → NB

c) $2.(x-2)\sqrt{3}(x^2+1)(3-4x) \leq 0 \;/:2\sqrt{3}$

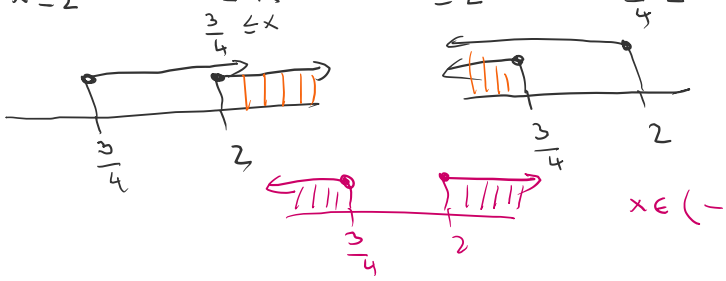
$(x-2)(x^2+1)(3-4x) \leq 0$

$x^2+1 \neq 0$

$(x-2).(3-4x) \leq 0$

$(x-2 \geq 0 \wedge 3-4x \leq 0) \vee (x-2 \leq 0 \wedge 3-4x \geq 0)$

$x \geq 2$ ; $3 \leq 4x$ ; $\frac{3}{4} \leq x$ ; $x \leq 2$ ; $\frac{3}{4} \geq x$



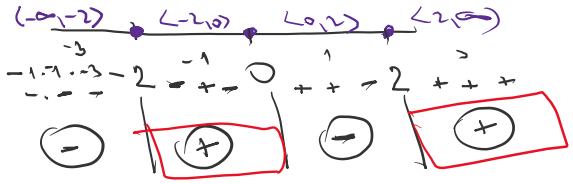
$x \in (-\infty; \frac{3}{4}\rangle \cup \langle 2; \infty)$

d) $x^3 - 4x \geq 0$

$x(x^2-4) \geq 0$

$x(x+2)(x-2) \geq 0$

nulové body .... NB: $x=0$ $x=-2$ $x=2$



$x \in \langle -2; 0\rangle \cup \langle 2; \infty)$

e) $x^2 < 3x + 10 \;/-3x+10$

$x^2 - 3x - 10 < 0$

na súčin → úprava na štvorec

- **V PODIELOVOM TVARE**

a) $\frac{x-3}{3x-2} \geq 0$

b) $\frac{x-3}{(2-x)(2x-1)} \leq 0$

c) $\frac{(1-x)(3-x)}{(x^2-9)(x^2+3)} < 0$

d) $\frac{9}{x+2} \geq 3$

e) $x \geq \frac{6}{5-x}$

f) $\frac{3}{x-2} + \frac{2}{x+1} \geq 0$