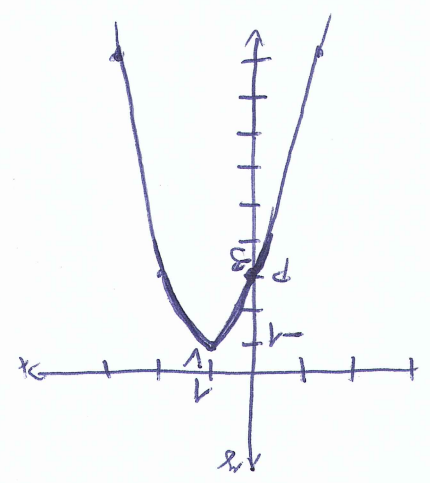


(Fr.)

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



KVADRATICKÁ FUNKCE - GRAF, VLASTNOSTI

x	-1	0	1	2	3
y	9	3	-1	-3	-9

GRAFEM PARABOLA

$$V = [1, -1]$$

$$D_f = \mathbb{R}$$

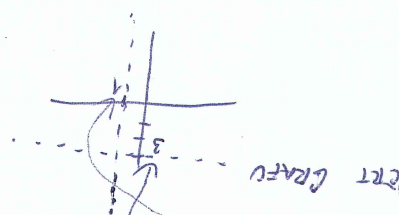
$$H_f = (-\infty, -1)$$

ROSTUCÍ  $(-\infty, 1)$ ! KLESACÍ  $(1, +\infty)$

PRŮSEČEK S OSAŤI  $P = [0, -3]$

LINEÁRNÍ LOMENÁ FUNKCE

$$y = \frac{x-1}{2} + 3$$



VLASTNOSTI:

$$D_f = \mathbb{R} \setminus 1 = (-\infty, 1) \cup (1, +\infty)$$

$$H_f = \mathbb{R} \setminus 3 = (-\infty, 3) \cup (3, +\infty)$$

(LESACÍ)  $(-\infty, 1)$

(LESACÍ)  $(1, +\infty)$

PRŮSEČEK S OSAŤI

$$A = [0, 1]$$

$$B = [\frac{1}{3}, 0]$$



$$0 = \frac{x-1}{2} + 3$$

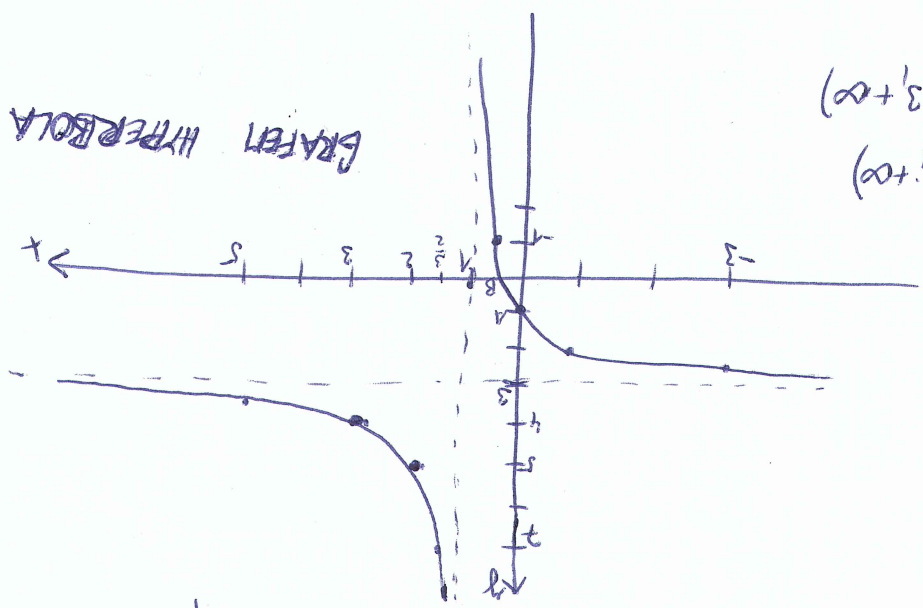
$$0 = 2 + 3x - 3$$

$$0 = 3x - 1$$

$$1 = 3x$$

$$x = \frac{1}{3}$$

GRAFEM HYPERBOLA



- GRAF, VLASTNOSTI

# VI. PŘÍPRAVA NA PÍSEMNOU PRÁCI

## KVADRATICKÁ NEROVNICE

PR.  $x^2 - 5x + 5 \geq 3x^2 + 2 \quad / -3x^2; -2$

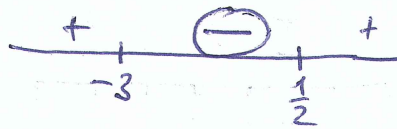
$$-2x^2 - 5x + 3 \geq 0 \quad / \cdot (-1)$$

$$2x^2 + 5x - 3 \leq 0$$

$$x_{1,2} = \frac{-5 \pm \sqrt{25 + 24}}{4}$$

$$x_1 = \frac{-5 + \sqrt{49}}{4} = \frac{-5 + 7}{4} = \frac{2}{4} = \underline{\underline{\frac{1}{2}}}$$

$$x_2 = \frac{-5 - \sqrt{49}}{4} = \frac{-5 - 7}{4} = \frac{-12}{4} = \underline{\underline{-3}}$$



$$\underline{\underline{x \in \left(-3; \frac{1}{2}\right)}}$$

## FUNKCE - VYJÁDŘENÍ Z ROVNICE, GRAF + VLASTNOSTI

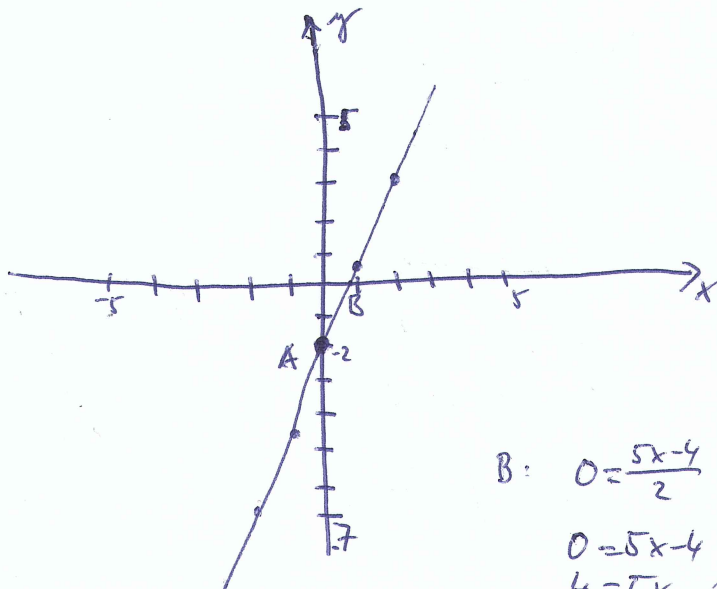
PR.  $5x - 2y - 4 = 0$

$$-2y = -5x + 4 \quad / \cdot (-1)$$

$$2y = 5x - 4$$

$$y = \frac{5x - 4}{2}$$

x	-2	-1	0	1	2
y	-7	-9/2	-2	1/2	3



$$D_f = \mathbb{R}$$

GRAFEM PŘÍMKA

$$H_f = \mathbb{R}$$

ROSTOUČÍ

PRŮSEČÍKY S OSAAMI:  $A = [0; -2]$

$B = \left[\frac{4}{5}; 0\right]$

$$B: 0 = \frac{5x - 4}{2}$$

$$x = \frac{4}{5}$$

$$0 = 5x - 4$$

$$4 = 5x$$

## 2 FUNKCE - NALEZT SPOLEČNÝ BOD(Y) ;

### GRAFICKY I POČETNĚ (SOUSTAVA 2 ROVNICE)

PR.

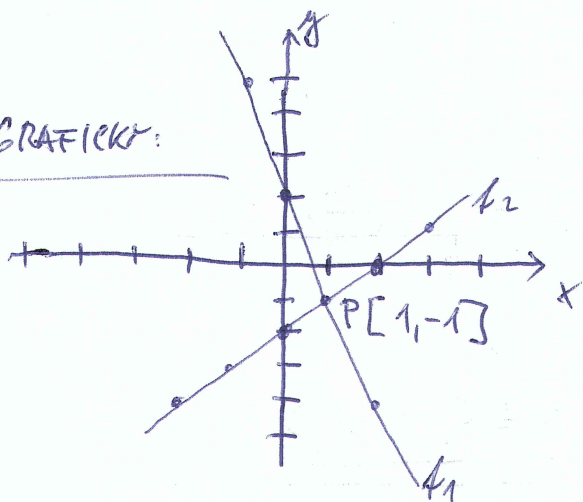
$$f_1: y = -3x + 2$$

x	-2	-1	0	1	2
y	8	5	2	-1	-4

$$f_2: y = x - 2$$

x	-2	-1	0	1	2	3
y	-4	-3	-2	-1	0	1

GRAFICKY:



POČETNĚ:

$$y = -3x + 2$$

$$y = x - 2$$

$$x - 2 = -3x + 2$$

$$4x = 4$$

$$x = 1$$

$$y = -3 \cdot 1 + 2$$

$$y = -3 + 2$$

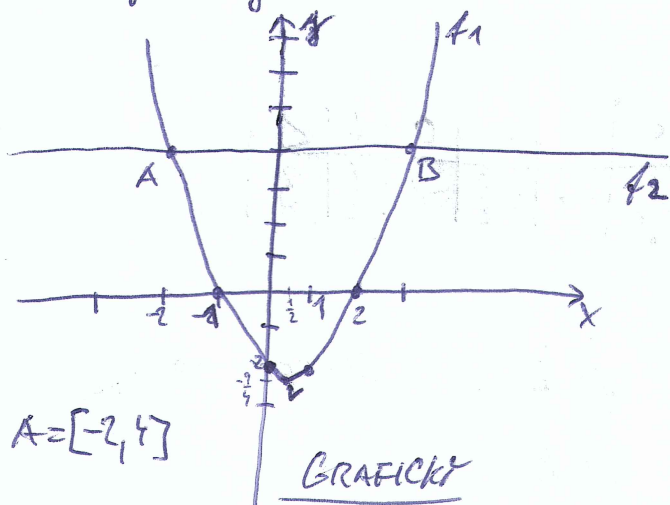
$$y = -1$$

$$P = [1, -1]$$

PR.

$$f_1: y = x^2 - x - 2 \quad (\text{Kvadratická funkce})$$

$$f_2: y = 4 \quad (\text{Konstantní funkce})$$



$$A = [-2, 4]$$

$$B = [3, 4]$$

GRAFICKY

x	-2	-1	0	1	2	3
y	4	0	-2	-2	0	4

Vrchol v prostřed mezi 0 a 1

$$x = \frac{1}{2}$$

$$y = \frac{1}{4} - \frac{1}{2} - 2 = \frac{1-2-8}{4}$$

$$= \frac{-9}{4} = -2,25$$

$$V = \left[ \frac{1}{2}, -\frac{9}{4} \right]$$

POČETNĚ:

$$y = x^2 - x - 2$$

$$y = 4$$

$$4 = x^2 - x - 2$$

$$0 = x^2 - x - 6$$

$$x_{1,2} = \frac{1 \pm \sqrt{1+24}}{2}$$

$$x_1 = \frac{1+5}{2} = 3 \quad B = [3, 4]$$

$$x_2 = \frac{1-5}{2} = -2 \quad A = [-2, 4]$$