

## Parabola II - tečna paraboly

Pr. 2 Ukaáte, že rovnice  $y^2 - 6x - 4y = 0$  je dána P.  
určete  $V, F, d$ .

doplňme na  $\square$ :

$$y^2 - 4y - 6x = 0$$

$$(y-2)^2 - 4 - 6x = 0$$

$$(y-2)^2 = 6x + 4$$

$$(y-m)^2 = \pm 2p(x-m)$$

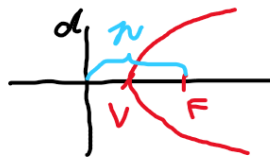
$$(y-2)^2 = 6\left(x + \frac{2}{3}\right)$$

$\Rightarrow$  parabola

$$V\left[-\frac{2}{3}; 2\right]$$

$$p = 3$$

$$-\frac{2}{3} + \frac{3}{2} = \frac{5}{6}$$



$$F\left[\frac{5}{6}; 2\right]$$

$$d: x = -\frac{2}{3} - \frac{3}{2} = -\frac{13}{6}$$

tečna paraboly v bodě  $T[x_0, y_0]$

$$I. (y-m)(y_0-m) = \pm p(x-m) \pm p(x_0-m)$$

$$II. (x-m)(x_0-m) = \pm p(y-m) \pm p(y_0-m)$$

Pr. Bodem  $M\left[2; 2\right]$  paraboly  $y^2 - 6x + p = 0$  udeřte tečnu.

$$y^2 = 6x - p$$

$$p = 3 \quad V\left[\frac{4}{3}; 0\right]$$

$$P: \underline{y^2 = 6\left(x - \frac{4}{3}\right)}$$

$$y \cdot 2 = 3\left(x - \frac{4}{3}\right) + 3\left(2 - \frac{4}{3}\right)$$

$$2y = 3x - 4 + 6 - 4$$

$$\underline{\underline{t: 3x - 2y - 2 = 0}}$$