

Zadatak 40. Pravac $2x+3=0$ ravnalica je parabole kojoj je žarište u ishodištu koordinatnog sustava. Odredi jednadžbu parabole.

Rješenje.

$$\text{fokus} \dots F(0,0)$$

$$\text{ravnalica} \dots 2x+3=0, \quad x = -\frac{3}{2}$$

$$\text{tjeme} \dots T\left(\frac{-\frac{3}{2}+0}{2}, \frac{0+0}{2}\right) \implies T\left(-\frac{3}{4}, 0\right)$$

$$\frac{p}{2} = x_F - x_T = 0 + \frac{3}{4} = \frac{3}{4} \implies p = \frac{3}{2}$$

$$P \dots (y-0)^2 = 2 \cdot \frac{3}{2} \left(x + \frac{3}{4}\right)$$

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

$$y^2 = 3x + \frac{9}{4}$$