

Př: elipsa:  $\frac{x^2}{625} + \frac{y^2}{400} = 1$ ; přímka  $4x + 5y = 140$   
 $\cdot 10\,000$   
 $16x^2 + 25y^2 = 10\,000$

$$x = \frac{140 - 5y}{4}$$

$$16 \cdot \frac{(140 - 5y)^2}{16} + 25y^2 = 10\,000$$

$$19600 - 1400y + 25y^2 + 25y^2 - 10000 = 0$$

$$50y^2 - 1400y + 9600 = 0 \quad | : 50$$

$$y^2 - 28y + 192 = 0$$

$$y_{1,2} = \frac{28 \pm \sqrt{784 - 768}}{2} = \frac{28 \pm \sqrt{16}}{2} = \frac{28 \pm 4}{2} = \begin{cases} 16 \\ 12 \end{cases}$$

průsečky:  $T_1[15; 16] \quad T_2[20; 12]$

lečny v těchto bodech:

$$t_1: \frac{x \cdot 15}{625} + \frac{y \cdot 16}{400} = 1 \rightarrow 240x + 400y = 10^3 \rightarrow$$

$$24x + 40y - 100 = 0 \rightarrow \boxed{6x + 10y - 25 = 0}$$

$$t_2: \frac{x \cdot 20}{625} + \frac{y \cdot 12}{400} = 1 \rightarrow 320x + 300y = 10^3 \rightarrow$$

$$32x + 30y - 100 = 0 \rightarrow \boxed{16x + 15y - 50 = 0}$$