

**Zadatak 38.** Odredi točke na hiperboli  $x^2 - 3y^2 = 12$  kojima su radijvektori međusobno okomiti.

**Rješenje.** Točke su presjek kružnice  $x^2 + y^2 = e^2$  i dane hiperbole.

$$H \dots x^2 - 3y^2 = 12 \quad / : 12$$

$$\frac{x^2}{12} - \frac{y^2}{4} = 1$$

$$e^2 = a^2 + b^2 = 16 \implies e = 4 \implies$$

$$k \dots x^2 + y^2 = 16$$

$$k \cap H \dots \left. \begin{array}{l} x^2 - 3y^2 = 12 \\ x^2 + y^2 = 16 \end{array} \right\} -$$

$$-4y^2 = -4 \quad / : (-4)$$

$$y^2 = 1 \implies y = \pm 1$$

$$x^2 + 1 = 16$$

$$x^2 = 15 \implies x = \pm\sqrt{15} \implies T_{1,2,3,4}(\pm\sqrt{15}, \pm 1)$$