

**Zadatak 43.** Središte kružnice  $(x + 4)^2 + y^2 = 36$  žarište je elipse  $b^2x^2 + a^2y^2 = a^2b^2$ . Ista kružnica prolazi tjemenu male osi elipse. Napiši jednadžbu elipse.

*Rješenje.*

$$k \dots (x + 4)^2 + y^2 = 36$$

$$E \dots b^2x^2 + a^2y^2 = a^2b^2$$

$$S(-4, 0) = F_1 \implies e = 4$$

$$T(0, b) = k \cap E$$

$$x = 0$$

$$16 + y^2 = 36$$

$$y^2 = 20$$

$$y = \pm 2\sqrt{5} \implies b = 2\sqrt{5}$$

$$20x^2 + 36y^2 = 20 \cdot 36 \quad / : 20 \cdot 36$$

$$\frac{x^2}{36} + \frac{y^2}{20} = 1$$