

Zadatak 57. Ordinata svake točke kružnice $x^2 + y^2 = 36$ je raspolovljena. Koju krivulju čine sva ta polovišta?

Rješenje.

$$k \dots x^2 + y^2 = 36$$

$$A(x, y) \in k \implies B\left(x, \frac{y}{2}\right) \in k'$$

$$x^2 + y^2 = 36$$

$$y = \sqrt{36 - x^2} \in k \implies y = \frac{\sqrt{36 - x^2}}{2} \in k'$$

$$k' \dots y = \frac{\sqrt{36 - x^2}}{2} \quad / \cdot 2$$

$$2y = \sqrt{36 - x^2} \quad / ^2$$

$$4y^2 = 36 - x^2$$

$$x^2 + 4y^2 = 36 \quad (\text{elipsa})$$