

**Zadatak 40.** Vrhovi trokuta su žarišta elipse  $x^2 + 4y^2 = 12$  i središte kružnice  $x^2 + y^2 - 2x - 6y + 9 = 0$ . Kolika je površina tog trokuta?

*Rješenje.*

$$x^2 + 4y^2 = 12 \quad / : 12$$

$$E \dots \frac{x^2}{12} + \frac{y^2}{3} = 1$$

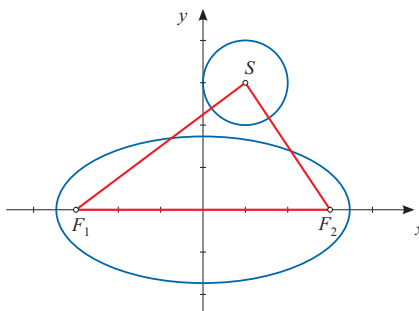
$$e^2 = a^2 - b^2 = 12 - 3 = 9 \implies e = 3$$

$$F_1(-3, 0), F_2(3, 0)$$

$$x^2 + y^2 - 2x - 6y + 9 = 0$$

$$(x-1)^2 - 1 + (y-3)^2 - 9 + 9 = 0$$

$$k \dots (x-1)^2 + (y-3)^2 = 1 \implies S(1, 3), r = 1$$



$$P = \frac{2e \cdot y_S}{2} = e \cdot y_S = 3 \cdot 3 = 9$$