

**Zadatak 11.** Točkom  $T(-2, 6)$  položi pravac koji s pravcima  $5x - y + 4 = 0$  i  $x + 5y - 6 = 0$  zatvara jednake kutove.

*Rješenje.*

$$T(-2, 6)$$

$$p \dots 5x - y + 4 = 0 \implies y = 5x + 4$$

$$q \dots x + 5y - 6 = 0 \implies y = -\frac{1}{5}x + \frac{6}{5}$$

$$r \dots y = kx + l, \quad T(-2, 6) \in r, \quad \sphericalangle(p, r) = \sphericalangle(q, r)$$

$$\operatorname{tg} \sphericalangle(p, r) = \operatorname{tg} \sphericalangle(q, r)$$

$$\left| \frac{k - 5}{1 + 5k} \right| = \left| \frac{k + tr15}{1 - \frac{1}{5}k} \right|$$

$$\left| \frac{k - 5}{1 + 5k} \right| = \left| \frac{\frac{5k+1}{5}}{\frac{5-k}{5}} \right|$$

$$\left| \frac{k - 5}{1 + 5k} \right| = \left| \frac{5k + 1}{5 - k} \right| \quad / \cdot |1 + 5k| \cdot |5 - k|$$

$$|k - 5| \cdot |5 - k| = |5k + 1| \cdot |1 + 5k|$$

$$\text{jer } |k - 5| = |5 - k|$$

$$|k - 5|^2 = |5k + 1|^2$$

$$(k - 5)^2 = (5k + 1)^2$$

$$k^2 - 10k + 25 = 25k^2 + 10k + 1$$

$$24k^2 + 20k - 24 = 0 \quad / : 4$$

$$6k^2 + 5k - 6 = 0$$

$$k_{1,2} = \frac{-5 \pm \sqrt{25 + 144}}{12} = \frac{-5 \pm 13}{12}$$

$$k_1 = -\frac{3}{2}, \quad k_2 = \frac{2}{3}$$

$$T(-2, 6), \quad k_1 = -\frac{3}{2}$$

$$y - 6 = -\frac{3}{2}(x + 2) \quad / \cdot 2$$

$$2y - 12 = -3x - 6$$

$$3x + 2y - 6 = 0$$

$$T(-2, 6), \quad k_2 = \frac{2}{3}$$

$$y - 6 = \frac{2}{3}(x + 2) \quad / \cdot 3$$

$$3y - 18 = 2x + 4$$

$$2x - 3y + 22 = 0$$