

**Zadatak 13.** Odredi jednadžbu pravca simetričnog pravcu  $y - 2 = 0$  s obzirom na pravac  $2x - 3y - 6 = 0$ .

*Rješenje.*

$$p \dots y - 2 = 0 \implies y = 2$$

$$q \dots 2x - 3y - 6 = 0 \implies y = \frac{2}{3}x - 2$$

$$p' \dots y = kx + l$$

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

$$\left| \frac{\frac{2}{3} - 0}{1 + \frac{2}{3} \cdot 0} \right| = \left| \frac{\frac{2}{3} - k}{1 + \frac{2}{3} \cdot k} \right|$$

$$\frac{2}{3} = \left| \frac{2-3k}{3+2k} \right|$$

$$\frac{2}{3} = \left| \frac{2-3k}{3+2k} \right| \quad / \cdot 3 \cdot |3+2k|$$

$$2 \cdot |3+2k| = 3 \cdot |2-3k|$$

$$3+2k = < 0 \implies k < -\frac{3}{2}$$

$$2-3k < 0 \implies k > \frac{2}{3}$$

	$\langle -\infty, -\frac{3}{2} \rangle$	$\langle -\frac{3}{2}, \frac{2}{3} \rangle$	$\langle \frac{2}{3}, \infty \rangle$
$3+2k$	-	+	+
$2-3k$	+	+	-

$$\langle -\frac{3}{2}, \frac{2}{3} \rangle$$

$$\langle -\infty, -\frac{3}{2} \rangle \cup \langle \frac{2}{3}, \infty \rangle$$

$$-2(3+2k) = 3(2-3k)$$

$$-6-4k = 6-9k$$

$$k = \frac{12}{5}$$

$$2(3+2k) = 3(2-3k)$$

$$6+4k = 6-9k$$

$$k = 0 \text{ (koeficijent od } p)$$

$$p \cap q = \{T\}$$

$$2 = \frac{2}{3}x - 2 \quad / \cdot 3$$

$$6 = 2x - 6$$

$$x = 6 \implies T(6, 2)$$

Pravac  $p'$  prolazi točkom  $T$  i ima koeficijent smjera  $k = \frac{12}{5}$ :

$$y - 2 = \frac{12}{5}(x - 6)$$

$$y - 2 = \frac{12}{5}x - \frac{72}{5} \quad / \cdot 5$$

$$5y - 10 = 12x - 72$$

$$12x - 5y - 62 = 0$$