Zadatak 22. Na pravcu $y = x - 3$ odredi točku jednako udaljenu od pravaca $y = 7x - 11$ i $y = -x + 5$.

Rješenje.

$$r \ \ldots \ y = x - 3$$
$$p \ \ldots \ y = 7x - 11 \implies 7x - y - 11 = 0$$
$$q \ \ldots \ y = -x + 5 \implies x + y - 5 = 0$$

Tražimo s_1, $s_2 \cap r$ pri čemu su s_1, s_2 simetrale kuta što ih zatvaraju p i q.

$$\frac{|7x - y - 11|}{\sqrt{49 + 1}} = \frac{|x + y - 5|}{\sqrt{1 + 1}}$$
$$\frac{|7x - y - 11|}{5\sqrt{2}} = \frac{|x + y - 5|}{\sqrt{2}} \quad / \cdot 5\sqrt{2}$$
$$|7x - y - 11| = 5|x + y - 5|$$
$$|7x - y - 11| = |5x + 5y - 25|$$
$$7x - y - 11 = \pm(5x + 5y - 25)$$

1) $7x - y - 11 = 5x + 5y - 25$

$2x - 6y + 14 = 0 \quad / : 2$

$x - 3y + 7 = 0 \ \ldots \ s_1$

$r \cap s_1 \ \ldots \ x - 3(x - 3) + 7 = 0$

$x - 3x + 9 + 7 = 0$

$2x = 16$

$x = 8$

$y = 8 - 3 = 5 \implies T_1(8, 5)$

2) $7x - y - 11 = -5x - 5y + 25$

$12x + 4y - 36 = 0 \quad / : 4$

$3x + y - 9 = 0 \ \ldots \ s_2$

$r \cap s_2 \ \ldots \ 3x + (x - 3) - 9 = 0$

$3x + x - 3 - 9 = 0$

$4x = 12$

$x = 3$

$y = 3 - 3 = 0 \implies T_2(3, 0)$