

Zadatak 25. Odredi ortogonalnu projekciju točke $T(3, -1)$ na pravac $x + 2y - 6 = 0$.

Rješenje.

$$T(3, -1)$$

$$p \dots x + 2y - 6 = 0 \implies y = -\frac{1}{2}x + 3$$

$$q \dots q \perp p, T \in q$$

$$q \perp p \implies k_q = -\frac{1}{k_p} = -\frac{1}{-\frac{1}{2}} = 2$$

$$T \in q \implies y + 1 = 2(x - 3)$$

$$y = 2x - 6 - 1$$

$$q \dots y = 2x - 7$$

$$\{T'\} = p \cap q \dots 2x - 7 = -\frac{1}{2}x + 3 \quad / \cdot 2$$

$$4x - 14 = -x + 6$$

$$5x = 20$$

$$x = 4$$

$$y = 2 \cdot 4 - 7$$

$$y = 1 \implies T'(4, 1)$$