Zadatak 5. Za koji se najmanji kut mora zakrenuti pravac $3x - 5y + 12 = 0$ oko svoje nultočke kako bi prošao točkom $T(-1, 5)$?

Rješenje.

$T(-1, 5)$

$3x - 5y + 12 = 0$

$5y = 3x + 12$

$y = \frac{3}{5}x + \frac{12}{5}$

nultočka: $0 = \frac{3}{5}x + \frac{12}{5} \quad / \cdot 5$

$3x + 12 = 0$

$x = -4$

Pravac q prolazi točkama T i T_1:

$y - y_1 = \frac{y_2 - y_1}{x_2 - x_1}(x - x_1)$

$y - 0 = \frac{5 - 0}{-1 + 4}(x + 4)$

$y = \frac{5}{3}(x + 4)$

$y = \frac{5}{3}x + \frac{20}{3}$

$\operatorname{tg}\varphi = \left|\frac{k_2 - k_1}{1 + k_1 k_2}\right| = \left|\frac{\frac{3}{5} - \frac{5}{3}}{1 + \frac{3}{5} \cdot \frac{5}{3}}\right| = \left|\frac{-\frac{16}{15}}{2}\right| = \frac{8}{15} \implies \varphi = 28°$