Zadatak 10. Odredi jednadžbe tangenata kružnice $x^2 + y^2 - 4x - 6y - 12 = 0$ ako su te tangente paralelne s pravcem $4x - 3y - 12 = 0$.

Rješenje. $k = \frac{4}{3}$, $-4 = -2p \implies p = 2$, $-6 = -2q \implies q = 3$,
$-12 = 4 + 9 - r^2 \implies r^2 = 25$

$$r^2(1 + k^2) = (q - kp - l)^2$$

$$25\left(1 + \frac{16}{9}\right) = \left(3 - \frac{8}{3} - l\right)^2$$

$$25 \cdot \frac{25}{9} = \left(\frac{1 - 3l}{3}\right)^2$$

$$625 = 1 - 6l + 9l^2$$

$$9l^2 - 6l - 624 = 0$$

$$3l^2 - 2l - 208 = 0$$

$$l_{1,2} = \frac{2 \pm \sqrt{4 + 2496}}{6}$$

$$l_{1,2} = \frac{2 \pm 50}{6}$$

$$l_1 = \frac{26}{3}, \quad l_2 = -8$$

$4x - 3y - 24 = 0$,
$4x - 3y + 26 = 0$.