Zadatak 18. Napiši jednadžbu kružnice opisane trokutu što ga s koordinatnim osima zatvara pravac $2x + 3y + 12 = 0$.

Rješenje. $T_1(-6, 0)$, $T_2(0, -4)$, $O(0, 0)$

$$(-6 - p)^2 + (0 - q)^2 = r^2$$
$$(0 - p)^2 + (-4 - q)^2 = r^2$$
$$(0 - p)^2 + (0 - q)^2 = r^2$$

$$\overline{}$$

$$36 + 12p + p^2 + q^2 = r^2$$
$$p^2 + 16 + 8q + q^2 = r^2$$
$$p^2 + q^2 = r^2$$

$$\overline{}$$

$$p^2 + q^2 + 12p + 36 = p^2 + q^2$$
$$p^2 + q^2 + 16 + 8q = p^2 + q^2$$

$$\overline{}$$

$$12p = -36 \implies p = -3$$
$$8q = -16 \implies q = -2$$
$$r^2 = 4 + 9 = 13$$

$$(x + 3)^2 + (y + 2)^2 = 13.$$