

Epicykloida – predĺžená

$c > r > 0, R > 0$

$$x = (R+r) \cos \frac{rt}{R} - c \cos \frac{(R+r)t}{R}, \quad y = (R+r) \sin \frac{rt}{R} - c \sin \frac{(R+r)t}{R}, \quad t \in R.$$

$$x = (R+r) \cos \varphi - c \cos \frac{(R+r)\varphi}{r}, \quad y = (R+r) \sin \varphi - c \sin \frac{(R+r)\varphi}{r}, \quad \varphi \in R.$$

$$x = \frac{10r}{7} \cos \frac{7t}{3} - 3r \cos \frac{10t}{3}, \quad y = \frac{10r}{7} \sin \frac{7t}{3} - 3r \sin \frac{10t}{3} \quad x = \frac{10r}{7} \cos \varphi - 3r \cos \frac{10\varphi}{7}, \quad y = \frac{10r}{7} \sin \varphi - 3r \sin \frac{10\varphi}{7}$$

$t \in \langle 0; 6\pi \rangle$ $\varphi \in \langle 0; 14\pi \rangle$

$$R = \frac{3r}{7}, \quad c = 3r$$