

# Epicykloida – predĺžená

$c > r > 0, R > 0$

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

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

$$x = \frac{7r}{4} \cos \frac{4t}{3} - \frac{5r}{4} \cos \frac{7t}{3}, \quad y = \frac{7r}{4} \sin \frac{4t}{3} - \frac{5r}{4} \sin \frac{7t}{3} \\ t \in \langle 0; 6\pi \rangle$$

$$x = \frac{7r}{4} \cos \varphi - \frac{5r}{4} \cos \frac{7\varphi}{4}, \quad y = \frac{7r}{4} \sin \varphi - \frac{5r}{4} \sin \frac{7\varphi}{4} \\ \varphi \in \langle 0; 8\pi \rangle$$

$$R = \frac{3r}{4}, \quad c = \frac{5r}{4}$$