

# Epicykloida – predĺžená

$c > r > 0, R > 0$

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

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

$$x = \frac{9r}{7} \cos \frac{7t}{2} - 2r \cos \frac{9t}{2}, \quad y = \frac{9r}{7} \sin \frac{7t}{2} - 2r \sin \frac{9t}{2} \\ t \in \langle 0; 4\pi \rangle$$

$$x = \frac{9r}{7} \cos \varphi - 2r \cos \frac{9\varphi}{7}, \quad y = \frac{9r}{7} \sin \varphi - 2r \sin \frac{9\varphi}{7} \\ \varphi \in \langle 0; 14\pi \rangle$$

$$R = \frac{2r}{7}, \quad c = 2r$$