

# Epicykloida – predĺžená

$c > r > 0, R > 0$

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

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

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

$$x = 2r \cos \varphi - 4r \cos 2\varphi, \quad y = 2r \sin \varphi - 4r \sin 2\varphi \\ \varphi \in \langle 0; 2\pi \rangle$$

$$R = r, c = 4r$$