

# Hypocykloida – predĺžená

$c > r > 0, R > r > 0$

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

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

$$x = 5r \cos \frac{t}{6} + 2r \cos \frac{5t}{6}, \quad y = 5r \sin \frac{t}{6} - 2r \sin \frac{5t}{6}$$
$$t \in \langle 0; 12\pi \rangle$$

$$x = 5r \cos \varphi + 2r \cos 5\varphi, \quad y = 5r \sin \varphi - 2r \sin 5\varphi$$
$$\varphi \in \langle 0; 2\pi \rangle$$

$$R = 6r, c = 2r$$