

Hypocykloida – predĺžená

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

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

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

$$x = 4r \cos \frac{t}{5} + 4r \cos \frac{4t}{5}, \quad y = 4r \sin \frac{t}{5} - 4r \sin \frac{4t}{5}$$
$$t \in \langle 0; 10\pi \rangle$$

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

$$R = 5r, c = 4r$$