

Epicykloida – predĺžená

$c > r > 0, R > 0$

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

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

$$x = \frac{17r}{8} \cos \frac{8t}{9} - 2r \cos \frac{17t}{9}, \quad y = \frac{17r}{8} \sin \frac{8t}{9} - 2r \sin \frac{17t}{9} \quad x = \frac{17r}{8} \cos \varphi - 2r \cos \frac{17\varphi}{8}, \quad y = \frac{17r}{8} \sin \varphi - 2r \sin \frac{17\varphi}{8}$$
$$t \in \langle 0; 18\pi \rangle \quad \varphi \in \langle 0; 16\pi \rangle$$

$$R = \frac{9r}{8}, \quad c = 2r$$