

# Pericykloida – predĺžená

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

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

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

$$x = -\frac{7r}{9} \cos \frac{9t}{2} + \frac{r}{2} \cos \frac{7t}{2}, \quad y = -\frac{7r}{9} \sin \frac{9t}{2} + \frac{r}{2} \sin \frac{7t}{2} \quad x = -\frac{7r}{9} \cos \varphi + \frac{r}{2} \cos \frac{7\varphi}{9}, \quad y = -\frac{7r}{9} \sin \varphi + \frac{r}{2} \sin \frac{7\varphi}{9}$$

$t \in \langle 0; 4\pi \rangle$        $\varphi \in \langle 0; 18\pi \rangle$

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