

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

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

$$x = \frac{(1+\pi)r}{\pi} \cos \pi t - \frac{3r}{4} \cos (1+\pi)t$$

$$y = \frac{(1+\pi)r}{\pi} \sin \pi t - \frac{3r}{4} \sin (1+\pi)t$$

$$t \in \langle 0; 6.2\pi \rangle$$

$$R = \frac{r}{\pi}, c = \frac{3r}{4}$$

$$x = \frac{(1+\pi)r}{\pi} \cos \varphi - \frac{3r}{4} \cos \frac{(1+\pi)\varphi}{\pi}$$

$$y = \frac{(1+\pi)r}{\pi} \sin \varphi - \frac{3r}{4} \sin \frac{(1+\pi)\varphi}{\pi}$$

$$\varphi \in \langle 0; 19.4779\pi \rangle$$