

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

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

$$x = \frac{7r}{4} \cos \frac{4t}{3} - \frac{r}{4} \cos \frac{7t}{3}, y = \frac{7r}{4} \sin \frac{4t}{3} - \frac{r}{4} \sin \frac{7t}{3}$$

$t \in (0; 6\pi)$

$$x = \frac{7r}{4} \cos \varphi - \frac{r}{4} \cos \frac{7\varphi}{4}, y = \frac{7r}{4} \sin \varphi - \frac{r}{4} \sin \frac{7\varphi}{4}$$

$\varphi \in (0; 8\pi)$

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