

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

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

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

$$t \in \langle 0; 14\pi \rangle$$

$$x = \frac{4r}{3} \cos \varphi + \frac{r}{4} \cos \frac{4\varphi}{3}, y = \frac{4r}{3} \sin \varphi - \frac{r}{4} \sin \frac{4\varphi}{3}$$

$$\varphi \in \langle 0; 6\pi \rangle$$

$$R = \frac{7r}{3}, c = \frac{r}{4}$$