

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

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

$$x = \frac{9r}{4} \cos \frac{4t}{5} - \frac{5r}{4} \cos \frac{9t}{5}, y = \frac{9r}{4} \sin \frac{4t}{5} - \frac{5r}{4} \sin \frac{9t}{5}$$

$$t \in \langle 0; 10\pi \rangle$$

$$x = \frac{9r}{4} \cos \varphi - \frac{5r}{4} \cos \frac{9\varphi}{4}, y = \frac{9r}{4} \sin \varphi - \frac{5r}{4} \sin \frac{9\varphi}{4}$$

$$\varphi \in \langle 0; 8\pi \rangle$$

$$R = \frac{5r}{4}, c = \frac{5r}{4}$$