

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

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

$$x = \frac{3r}{5} \cos \frac{5t}{8} + 5r \cos \frac{3t}{8}, y = \frac{3r}{5} \sin \frac{5t}{8} - 5r \sin \frac{3t}{8}$$

$$t \in \langle 0; 16\pi \rangle$$

$$x = \frac{3r}{5} \cos \varphi + 5r \cos \frac{3\varphi}{5}, y = \frac{3r}{5} \sin \varphi - 5r \sin \frac{3\varphi}{5}$$

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

$$R = \frac{8r}{5}, c = 5r$$