

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

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

$$x = (\sqrt{2}-1)r \cos \frac{t}{\sqrt{2}} + 4r \cos \frac{(\sqrt{2}-1)t}{\sqrt{2}}$$

$$y = (\sqrt{2}-1)r \sin \frac{t}{\sqrt{2}} - 4r \sin \frac{(\sqrt{2}-1)t}{\sqrt{2}}$$

$$t \in \langle 0; 8.7681\pi \rangle$$

$$R = \sqrt{2}r, c = 4r$$

$$x = (\sqrt{2}-1)r \cos \varphi + 4r \cos (\sqrt{2}-1)\varphi$$

$$y = (\sqrt{2}-1)r \sin \varphi - 4r \sin (\sqrt{2}-1)\varphi$$

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