

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

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

$$x = \frac{9r}{8} \cos 8t - \frac{5r}{4} \cos 9t, y = \frac{9r}{8} \sin 8t - \frac{5r}{4} \sin 9t$$

$$t \in (0; 2\pi)$$

$$x = \frac{9r}{8} \cos \varphi - \frac{5r}{4} \cos \frac{9\varphi}{8}, y = \frac{9r}{8} \sin \varphi - \frac{5r}{4} \sin \frac{9\varphi}{8}$$

$$\varphi \in (0; 16\pi)$$

$$R = \frac{r}{8}, c = \frac{5r}{4}$$