

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

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

$$x = -\frac{8r}{9} \cos 9t + 2r \cos 8t, y = -\frac{8r}{9} \sin 9t + 2r \sin 8t \quad x = -\frac{8r}{9} \cos \varphi + 2r \cos \frac{8\varphi}{9}, y = -\frac{8r}{9} \sin \varphi + 2r \sin \frac{8\varphi}{9}$$

$t \in (0; 2\pi)$ $\varphi \in (0; 18\pi)$

$$R = \frac{r}{9}, c = 2r$$