

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

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

$$x = \frac{11r}{9} \cos \frac{9t}{2} - 3r \cos \frac{11t}{2}, y = \frac{11r}{9} \sin \frac{9t}{2} - 3r \sin \frac{11t}{2} \quad x = \frac{11r}{9} \cos \varphi - 3r \cos \frac{11\varphi}{9}, y = \frac{11r}{9} \sin \varphi - 3r \sin \frac{11\varphi}{9}$$

$t \in (0; 4\pi)$   $\varphi \in (0; 18\pi)$

$$R = \frac{2r}{9}, c = 3r$$