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

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

$x = 9r\cos\frac{t}{8} - \frac{3r}{4}\cos\frac{9t}{8},\ y = 9r\sin\frac{t}{8} - \frac{3r}{4}\sin\frac{9t}{8}$

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

$x = 9r\cos\varphi - \frac{3r}{4}\cos 9\varphi,\ y = 9r\sin\varphi - \frac{3r}{4}\sin 9\varphi$

$\varphi \in \langle 0\,;\,2\pi\rangle$

$$R = 8r,\ c = \frac{3r}{4}$$