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

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

$x = 5r\cos\frac{t}{4}$, $y = 5r\sin\frac{t}{4}$
$t \in \langle 0\,;\, 8\pi \rangle$

$x = 5r\cos\varphi$, $y = 5r\sin\varphi$
$\varphi \in \langle 0\,;\, 2\pi \rangle$

$R = 4r,\ c = 0$