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

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

$x = -\frac{3r}{7}\cos\frac{7t}{4} + 3r\cos\frac{3t}{4}, \; y = -\frac{3r}{7}\sin\frac{7t}{4} + 3r\sin\frac{3t}{4}$ $\qquad$ $x = -\frac{3r}{7}\cos\varphi + 3r\cos\frac{3\varphi}{7}, \; y = -\frac{3r}{7}\sin\varphi + 3r\sin\frac{3\varphi}{7}$

$t \in \langle 0 \,;\, 8\pi \rangle$ $\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad$ $\varphi \in \langle 0 \,;\, 14\pi \rangle$

$$\boxed{R = \frac{4r}{7}, \; c = 3r}$$