Hypocykloida – skrátená $\quad\quad R>r>c>0$

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

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

$x = 4r\cos\frac{t}{5} + \frac{r}{4}\cos\frac{4t}{5},\ y = 4r\sin\frac{t}{5} - \frac{r}{4}\sin\frac{4t}{5}$
$t\in\langle 0\,;\,10\pi\rangle$

$x = 4r\cos\varphi + \frac{r}{4}\cos 4\varphi,\ y = 4r\sin\varphi - \frac{r}{4}\sin 4\varphi$
$\varphi\in\langle 0\,;\,2\pi\rangle$

$$R = 5r,\ c = \frac{r}{4}$$