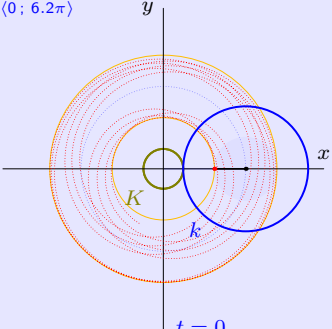
Epicykloida – skrátená $r > c \geq 0,\ R > 0$

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

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

$x = \frac{(1+\pi)r}{\pi}\cos\pi t - \frac{r}{2}\cos(1+\pi)t$
$y = \frac{(1+\pi)r}{\pi}\sin\pi t - \frac{r}{2}\sin(1+\pi)t$
$t \in \langle 0\,;\ 6.2\pi\rangle$

$R = \frac{r}{\pi},\ c = \frac{r}{2}$



$x = \frac{(1+\pi)r}{\pi}\cos\varphi - \frac{r}{2}\cos\frac{(1+\pi)\varphi}{\pi}$
$y = \frac{(1+\pi)r}{\pi}\sin\varphi - \frac{r}{2}\sin\frac{(1+\pi)\varphi}{\pi}$
$\varphi \in \langle 0\,;\ 19.4779\pi\rangle$