$x := 0$

$y := 0.5$

$u := 0.8$

$v := 0.5$

$$z := \begin{bmatrix} x \\ y \\ u \\ v \end{bmatrix}$$

$$\Omega := \frac{\pi}{4}$$

.

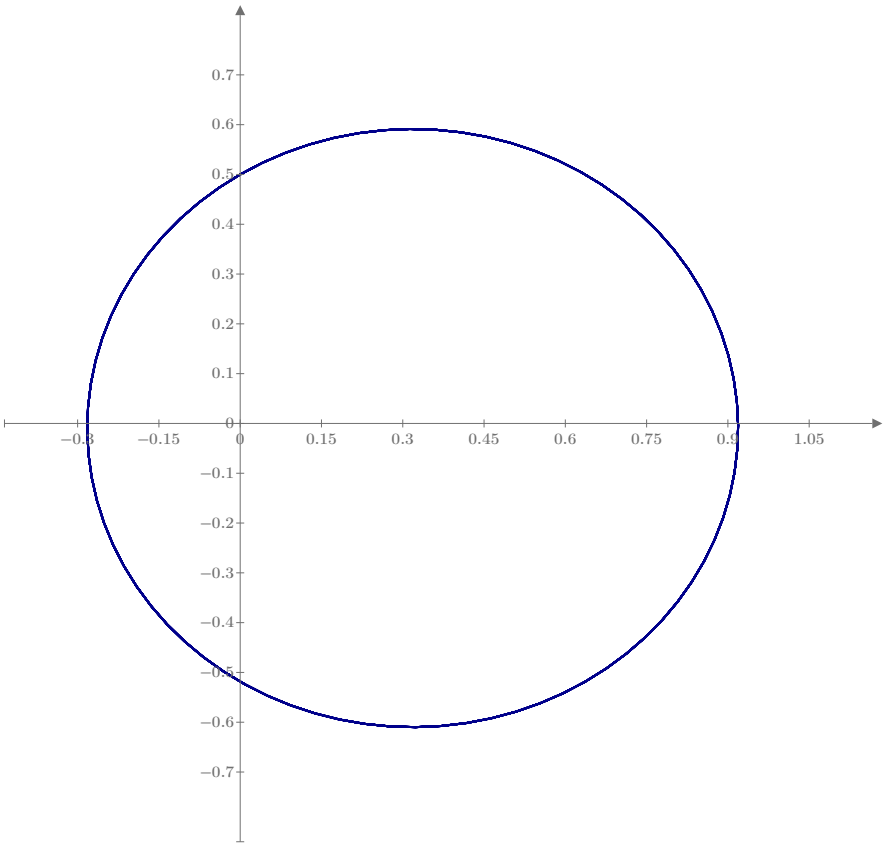
$$d(x, y) := \sqrt{x^2 + y^2}$$

$$D(t, z) := \begin{bmatrix} z_2 \\ z_3 \\ 2 \cdot \Omega \cdot z_3 \\ -2 \cdot \Omega \cdot z_2 \end{bmatrix}$$

$$Z := \text{rkfixed}(z, 0, 50, 1000, D) =$$

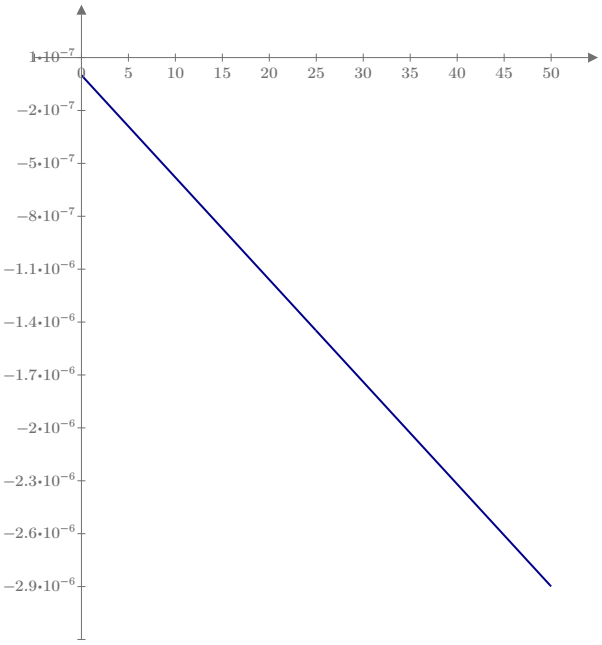
$$i := 0 .. \text{rows}(Z) - 1$$

$$\begin{bmatrix} 0 & 0 & 0.5 & 0.8 & 0.5 \\ 0.05 & 0.041 & 0.523 & 0.837 & 0.436 \\ 0.1 & 0.084 & 0.544 & 0.868 & 0.369 \\ 0.15 & 0.128 & 0.56 & 0.895 & 0.299 \\ 0.2 & 0.173 & 0.573 & 0.915 & 0.228 \\ 0.25 & 0.219 & 0.583 & 0.93 & 0.156 \\ 0.3 & 0.266 & 0.589 & 0.94 & 0.082 \\ 0.35 & 0.313 & 0.591 & 0.943 & 0.008 \\ & & & & \vdots \end{bmatrix}$$



$$\left(Z^{\langle 2 \rangle}\right)_i$$

$\left(Z^{\langle 1\rangle}\right)_i$



$\left(\left(Z^{\langle 3\rangle}\right)_i\right)^2+\left(\left(Z^{\langle 4\rangle}\right)_i\right)^2-u^2-v^2$

$\left(Z^{\langle 0\rangle}\right)_i$

$$\max\left(\left(\left(Z^{\langle 3\rangle}\right)\right)^2+\left(\left(Z^{\langle 4\rangle}\right)\right)^2\right)-u^2-v^2=0$$

$$\min\left(\left(\left(Z^{\langle 3\rangle}\right)\right)^2+\left(\left(Z^{\langle 4\rangle}\right)\right)^2\right)-u^2-v^2=-2.89908597284061\cdot 10^{-6}$$