

$$y' = \frac{\sin t}{5y^4}$$

I takove, $\bar{x} \in \forall t \in I; y(t) \neq 0$.

$$5y^4 \cdot y' = \sin t$$

$y > 0$ na I nebo $y < 0$ na I

$$5y^4 \cdot \frac{dy}{dt} = \sin t \quad | dt$$

$$\int 5y^4 dy = \int \sin t dt$$

$$y^5 = C - \cos t, \quad C \in \mathbb{R}$$

$$y(t) = \sqrt[5]{C - \cos t}, \quad C \in \mathbb{R}, \quad t \in I$$

$I: \cos t \neq C$.

$$y(0) = -1 \Rightarrow (-1)^5 = C - \cos(0) \Rightarrow C = 0 \Rightarrow$$

$$\underline{\underline{\varphi(t) = \sqrt[5]{-\cos t}, \quad t \in \left(-\frac{\pi}{2}, \frac{\pi}{2}\right)}}$$

$$y(2\pi) = -1 \Rightarrow$$

$$\underline{\underline{\psi(t) = \sqrt[5]{-\cos t}, \quad t \in \left(\frac{3\pi}{2}, \frac{5\pi}{2}\right)}}$$