$$(5y^4+3y^2+1)\cdot y' = \frac{1}{\sqrt{1-t^2}}, \qquad y(0)=0.$$

$$g(y)\cdot y' = h(t)$$

$$g(y) = 5y^4+3y^2+1, \quad g\in C(\mathbb{R}),$$

$$\forall y\in\mathbb{R}:\ g(y)>0.$$

$$h(t) = \frac{1}{\sqrt{1-t^2}}, \qquad h\in C((-1,1)).$$

$\exists!$ max. řešení φ úlohy

$$G(y) = \int(5y^4+3y^2+1)\,dy = y^5+y^3+y$$

$$H(t) = \int\frac{1}{\sqrt{1-t^2}}\,dt = \arcsin t, \qquad t\in(-1,1).$$

$$y=\varphi(t): \qquad y^5+y^3+y = \arcsin t + C$$

$$y(0)=0 \Rightarrow \qquad 0 = C \quad \Rightarrow$$

$$y=\varphi(t): \quad y^5+y^3+y = \arcsin t, \qquad t\in(-1,1)$$

$$y(0)=0$$