

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

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

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

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

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

∃! max. řešení φ úlohy

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

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

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

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

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

$$\underline{\underline{y(0) = 0}}$$