Практика 5

12) $\begin{cases} x = \arccos \frac{1}{\sqrt{1+t^2}} \\ y = \arcsin \frac{1}{\sqrt{1+t^2}} \end{cases}$ $y_x' = ?$

$$y_x' = \frac{y_t'}{x_t'}$$

$$y_t' = \frac{1}{\sqrt{1-\frac{1}{1+t^2}}} \cdot \frac{1}{2\sqrt{1+t^2}} \cdot 2t = \frac{t}{\sqrt{1+t^2-1}} = \frac{t}{t} = 1$$

$$x_t' = -\frac{1}{\sqrt{1-\frac{1}{1+t^2}}} \cdot \frac{1}{2\sqrt{1+t^2}} \cdot 2t = -1$$

$$y_x' = \frac{1}{-1} = -1$$