

$$10. y = \sin^{-1} \sqrt{1-49x^2}$$

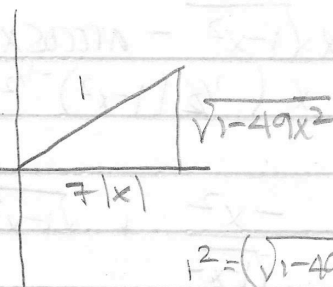
$$\sin y = \sqrt{1-49x^2}$$

$$\cos y \frac{dy}{dx} = \frac{1}{2}(1-49x^2)^{-1/2}(-98x)$$

$$\frac{dy}{dx} = \frac{-49x(1-49x^2)^{-1/2}}{\cos y}$$

$$\frac{dy}{dx} = \frac{-49x}{7|x|\sqrt{1-49x^2}}$$

$$\frac{dy}{dx} = \frac{-7x}{|x|\sqrt{1-49x^2}}$$



$$1^2 = (\sqrt{1-49x^2})^2 + c^2$$

$$1 - (1-49x^2) = c^2$$

$$49x^2 = c^2$$

$$7|x| = c$$

$$11. y = \arccos(t^2)$$

$$\cos y = t^2$$

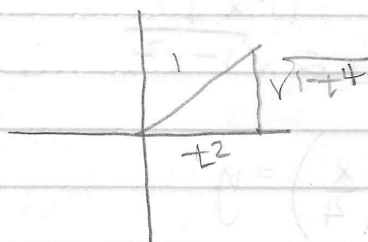
$$-\sin y \frac{dy}{dt} = 2t$$

$$\frac{dy}{dt} = \frac{2t}{-\sin y}$$

$$\frac{dy}{dt} = \frac{2t}{-\sqrt{1-t^4}}$$

$$\frac{dy}{dt} = \frac{-2t}{\sqrt{1-t^4}}$$

$$\frac{dy}{dt} = \frac{-2t}{\sqrt{1-t^4}}$$



$$12. y = \arctan e^x$$

$$y = \frac{e^x}{1+(e^x)^2}$$

$$y' = \frac{e^x}{1+e^{2x}}$$

$$13. y = x^2 \tan^{-1} x$$

$$y' = x^2 \cdot \frac{1}{1+x^2} + \tan^{-1} x \cdot 2x$$

$$y' = \frac{x^2}{1+x^2} + 2x \tan^{-1} x$$