

Name: _____
AP Calc AB: Derivatives of Inverse Trig Functions Homework

Date: _____
Ms. Loughran

For 1–7, find $\frac{dy}{dx}$.

1. $y = \sin^{-1}\left(\frac{1}{3}x\right)$

2. $y = \cos^{-1}(2x+1)$

3. $y = \tan^{-1}(x^2)$

4. $y = \sin^{-1}\left(\frac{1}{x}\right)$

5. $y = \ln(\cos^{-1} x)$

6. $y = x^2(\sin^{-1} x)^3$

7. $y = \sin^{-1} x + \cos^{-1} x$

8. Find $\frac{dy}{dx}$, if $x^3 + x \tan^{-1} y = e^y$.