

INVERSE TRIG FUNCTIONS II
AP CALCULUS

Answers
NAME _____

Find an equation of the tangent line to the graph of the function at the given point.

1. $y = 2 \arcsin x; \left(\frac{1}{2}, \frac{\pi}{3}\right)$

$$y = \frac{4\sqrt{3}}{3}x - \frac{2\sqrt{3}}{3} + \frac{\pi}{3}$$

2. $y = 2 \arctan \frac{x}{2}; \left(2, \frac{\pi}{4}\right)$

$$y = \frac{1}{4}x - \frac{1}{2} + \frac{\pi}{4}$$

3. $y = 4x \arccos(x-1); (1, 2\pi)$

$$y = (2\pi - 4)x - 4$$

Locate any relative extrema.

4. $f(x) = \operatorname{arcsec} x - x$

$$\left(\sqrt{\frac{1+\sqrt{5}}{2}}, 3.747\right) \left(-\sqrt{\frac{1+\sqrt{5}}{2}}, -.606\right)$$

5. $f(x) = \arctan x - \arctan(x-4)$

$$\text{Rel max} \\ (2, 2.214)$$

