

**MAT 136 (Calculus I), Prof. Jim Swift, In-Class Worksheet:  
Derivative of inverse trig functions, and the tangent line to a curve**

1. Find the derivative of these functions:

$$f(x) = x \arctan(x^2)$$

$$g(x) = \ln |\arcsin(2x)|$$

2. Find an equation of the tangent line to the curve  $x^2 + xy^2 + y^3 = 7$  at the point  $(x, y) = (2, 1)$ .