Panther ID: _____ **NAME:** _____

MAC 2311: Worksheet Oct. 13, 2016

1) Compute the derivative of each of the following functions:

a) $y = \arcsin(x^2 + 1)$

b) $y = \left(\sin^{-1}(x^2 + 1)\right)^2$

2) Using the class argument for the derivative of $\arcsin(x)$, show that $(\arccos x)' = -\frac{1}{\sqrt{1-x^2}}$.

3) Compute the derivative of each of the following functions:

a) $y = \arctan(\sin(x))$

b) $y = \cos(x)\tan^{-1}(2x)$

c) $y = \sin^{-1}(\cos(3x))$

d) $y = \frac{x^3+7}{\arctan(x^2)}$