

**Problem Set 2****Calculus 1****Due 10/18/19**

You are encouraged to work in groups of two to four on this assignment and make a single group submission. 3 points per problem, plus 1 bonus point for a submission suitable for college work.

1. Show that the derivative of  $f(x) = \cos^{-1} x$  is  $\frac{-1}{\sqrt{1-x^2}}$

2. Show that the derivative of  $g(x) = \cot^{-1} x$  is  $\frac{-1}{1+x^2}$

3. Show that the derivative of  $h(x) = \csc^{-1} x$  is  $\frac{-1}{x\sqrt{x^2-1}}$

