

You are encouraged to work in groups of two to four on this assignment and make a single group submission. Each problem is worth 3 points for correct and clearly justified answers, and spelling your name correctly on your submission is worth 1 point.

1. Find the derivative of $y = x^{\cos x}$.

2. Do #10 in §3.4 of Stewart.

3. Show that $\frac{d}{dx}(\sec^{-1} x) = \frac{1}{x\sqrt{x^2 - 1}}$.

