

**Quiz 3      Calculus 1      10/3/2012**

Each problem is worth 5 points. Clear and complete justification is required for full credit.

1. If  $f(x) = (e^x + x^3 - 5x + 7)(\sin x)$ , what is  $f'(x)$ ?

2. If  $g(x) = \cot x$ , show that  $g'(x) = -1/\sin^2 x$ . [Hint: Remember  $\cot x = \cos x / \sin x$ .]

