

Math 111.17 Fall 2002

Quiz #5

Name: _____

You have 15 minutes to complete this quiz which is worth 15 points. Calculators are permitted, but no other aids are allowed. Show all work neatly and in order, and clearly indicate your final answers. Answers must be justified whenever possible in order to earn full credit.

1. (8 points) Compute $\frac{d}{dx} \frac{\sin(\cos x)}{\sqrt{x+1}}$. Do not simplify your answer, but be sure to compute all derivatives.

2. (7 points) The swallowtail catastrophe curves are defined parametrically by $x(t) = 2ct - 4t^3$, $y(t) = -ct^2 + 3t^4$ for all t where c is a constant. Compute $\frac{dy}{dx}$.