

Math 124 (Collingwood) Quiz 2
February 13, 2003
10 points - 25 minutes

Name _____
Section/TA _____

Instructions: Show all your work. No credit for answers only. No notes allowed. Scientific calculators are allowed. No graphing calculators are allowed. Quiz is on front and back of this page. You need not simplify answers. However, your final answers should not involve any uncomputed derivatives. IN ALL CASES, BOX YOUR FINAL ANSWER(S).

1. (2pts) If a, b, c are constants and $y = ax^2 + \frac{b}{x} + c^2$, then $\frac{dy}{dx} =$

2. (2pts) If $F(x) = \frac{-8x}{x^2 + 2}$, then $F'(x) =$

3. (2pts) If $F(x) = \sin(e^{\frac{1}{x}})$, then $F'(x) =$

4. (2pts) If a, b are constants and $F(t) = e^{at} \sin(bt)$, then $\frac{dF}{dt} =$

5. (2pts) Below is the picture of the graph of $y = -x^2 + 8x - 14$ (thick curve). A tangent line to the curve having y -intercept=11 is also plotted. Find the x -coordinate of the labeled tangency point Q .

