MAT 137
Problem Set B

This problem set is intended to help you prepare for Test 2. It is not comprehensive: it only contains some problems that were not included in past problem sets or in past tutorials. You do not need to turn in any of these problems.

For further preparation review Problem Sets 2 and 3, Tutorials 6 through 9, Unit 2, 3, 4 and 5,6 practice problems, and further textbook practice problems suggested on the course website under videos and schedule.

Problems

1. Approximate $\ln(1.01)$ using a linear approximation.

2. Find the equation of the line tangent to the graph of f defined by $f(x) = \dfrac{x+1}{2x-3}$ at the point with x-coordinate 1.

3. Find an expression for $\frac{dy}{dx}$ by differentiation implicitly: $\dfrac{x}{\qquad} = x^2y^2 + 1$