Study Guide Test #3

No Calculator Part – 40 points

Find the derivative of 10 functions. You may use your tan review sheets as needed.

Calculator Part – 40 points

1. Find the points on a graph that have a specific slope. Hint. Set the derivative equal to the desired slope and solve for x. Replace these x values back into the function to find the y coordinates of the points.

2. Find the value of a derivative at a specific point.

3. Find the slope of a tangent line to a given function at a specific point.

4. Perform implicit differentiation and then find the equation of a tangent line at a given point.

5. Perform logarithmic differentiation.

6. Solve a related rates problem.