**C12 Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**/12**

**Tangents, Normals, and Rates of Change Test**

**[3] 1.** Find the average rate of change of over the interval .

**[3] 2.** Find the instantaneous rate of change of at

**[3] 3.** Determine the equation of a tangent line to at Write the equation of this tangent line in slope-intercept form. **Sketch a graph of f(x) and the tangent with three exact points for each.**

**[3] 4.** Determine the equation of a normal line to at Write the equation of this normal line in slope-intercept form. **Sketch a graph of f(x) and the normal with three exact points for each.**