

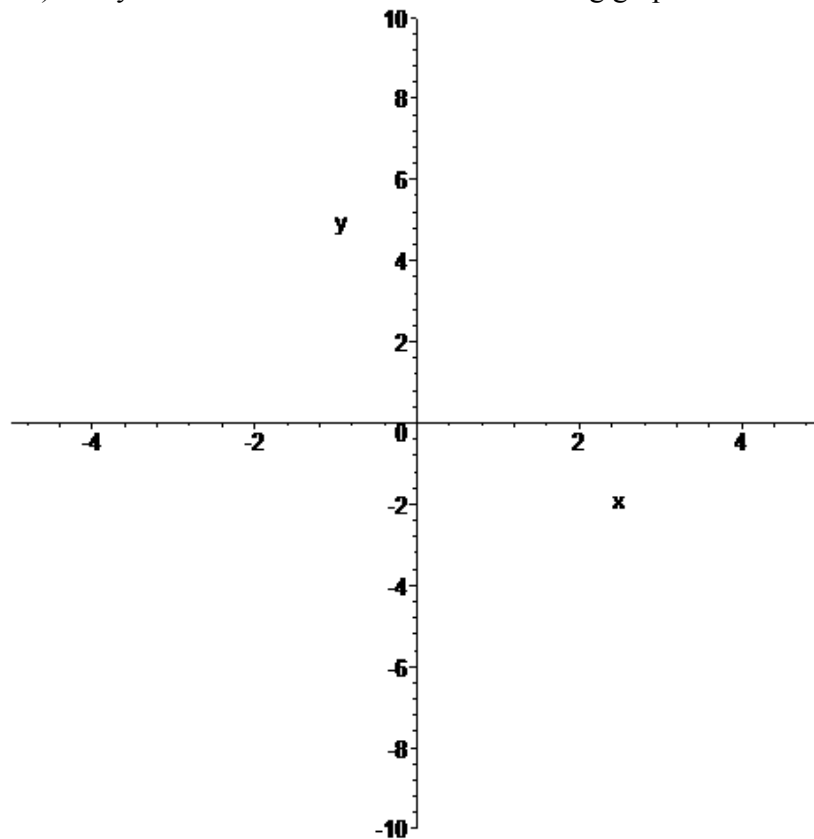
Name: \_\_\_\_\_

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

## QUIZ – TANGENTS AND NORMALS TO FUNCTIONS

1. (100%) Given the function  $f(x) = 2x^2 + \frac{1}{x}$

a. (15%) Use your GDC to sketch it on the following graph:



b. (15%) Find its derivative.

c. (10%) Find the slope of the tangent to the function at the point where  $x = 1$ , sketch it on graph.

d. (10%) Find the slope of the normal to the function at the point where  $x = -1$ , sketch it on graph.

e. (15%) Find the point(s) in which the tangent to the function is parallel to the line  $y = -2x + 3$

f. (20%) Find the equation of the tangent where  $x = 2$

g. (15%) Find the equation of the normal where  $x = -2$