

Name: Date:

Minima/Maxima

1) a. $y = x^2 + 2x + 7$

b. $y = ax + 6$

a. Find “a” so that the system of equation has only one solution (you can solve this by factoring method):

b. Take the first derivative of the quadratic equation

c. Find critical point in the equation (maximum or minimum?)

2)

$$y = -x^2 + 8x - 4$$

- a. Find the critical point in the equation (maximum or minimum?)
- b. Find 3 linear equations that produce (each) only one solution with the quadratic equation above. Determine these equations so that one of them has a positive slope, one has a negative slope, and the last one has a slope of “zero”.
- c. Using Excel, graph all four equations on one single graph,