

SU08\_MTH104 Quadratic Functions Worksheet I Name: \_\_\_\_\_

For the following quadratic functions find:

1. a, b & c and the y-intercept (0,c)
2. the line of symmetry ( $x = \underline{\hspace{1cm}}$ )
3. the vertex (x, y)
4. the discriminant  $b^2 - 4ac$
5. the roots of the equation (x-intercepts), if any

Sketch each parabola using the above parameters

1).  $y = 2x^2 - 4x - 1$

2).  $y = 4 - x^2$

3).  $y = 1/3 x^2 + 2/3 x + 1$

4).  $y = 2x^2$

5).  $y = x^2 - 8$

6).  $y = 1/2 x^2$

7).  $y = -2x^2 + 8$

8).  $y = -x^2 - 1$

9).  $y = -1/2 x^2$

10).  $y = 2(x-1)^2 + 4$

11).  $y = -16t^2 + 80t + 3$

12).  $y = 4m^2 + 2n - 5$

13).  $y = -8x^2 + 2x + 7$

14).  $y = 2x^2 - 3x$

15).  $y = 8t^2 - 2$