Meramec Intermediate Algebra Quiz 8 Spring 2009

NAME: _____Score_____/10

Please **print** your name

A **quadratic** equation in **two** variables is an equation which may be written in the form

$y = ax^2 + bx + c$ where a, b, and c are real numbers and a is not 0.

The graph of a quadratic equation in two variables is a **parabola** which opens **up** if $a > 0$

and opens **down** if $a < 0$.

The x-intercepts of the graph of the quadratic equation $y = ax^2 + bx + c$ in two variables are found by solving the equation $\mathbf{0 = ax^2 + bx + c}$.

The vertex of the graph of a quadratic equation in two variables has first coordinate $\frac{-b}{2a}$.

If the discriminant of the equation $y = ax^2 + bx + c$ is positive, the graph has **two** x-intercepts.

If the discriminant of the equation $y = ax^2 + bx + c$ is zero, the graph has **one** x-intercept.

If the discriminant of the equation $y = ax^2 + bx + c$ is negative, the graph has **no** x-intercepts.