

NAME: _____ Score _____/10

1. The graph of a linear equation in one variable is point.
2. The graph of a linear equation in two variables is line.
3. The graph of a quadratic equation in one variable is **two, one, or no points**.
4. The graph of a quadratic equation in two variable is **a parabola**
5. If the leading coefficient of a quadratic equation in two variables is positive then the graph opens **up**.
6. What is the first coordinate of the vertex of the graph of $y = 2x^2 - 3x + 1$?
The first coordinate of the vertex is $-\frac{b}{2a} = -\frac{-3}{4} = \frac{3}{4}$
7. What is the shape of the graph of a quadratic equation in two variables?
It is a parabola
8. If the point $(2, k)$ is on the graph of the equation $y = x^2 + 3x - 5$, what is the value of k ?
If $(2, k)$ is on the graph then $k = 2^2 + 3(2) - 5 = 5$
9. If the point $(-2, k)$ is on the graph of $x^3 + 1$, what is the value of k ?
If $(-2, k)$ is on the graph then $k = (-1)^3 + 1 = -8 + 1 = -7$
10. If the graph of a quadratic equation $y = ax^2 + bx + c$ has two x -intercepts, what do you know about the discriminant, $b^2 - 4ac$?
The discriminant is positive.