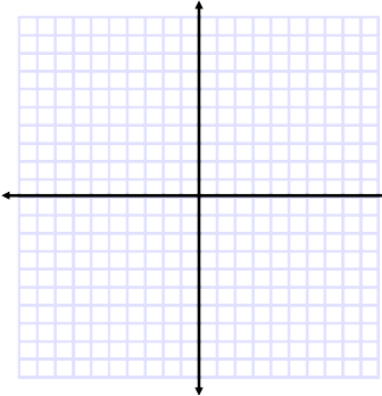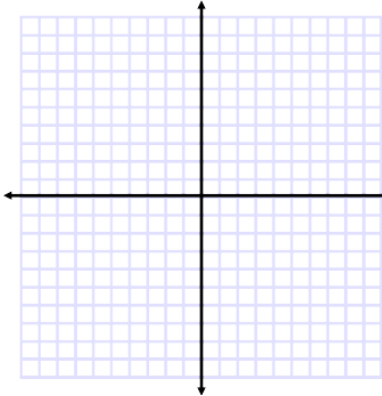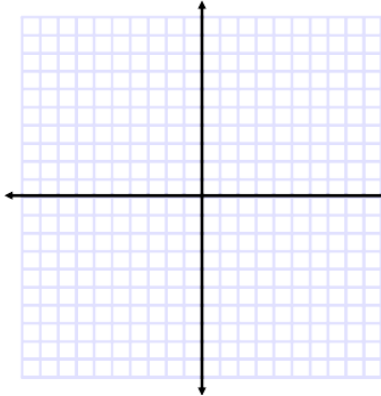# Solving Quadratics

How many zeros?

How can we discriminate between quadratics with <u>two distinct roots</u>, <u>two equal roots</u> and <u>no real roots</u> using The Quadratic Formula?

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

We use the _____ .

Two distinct roots	No real roots	Two equal roots
The discriminant is	The discriminant is	The discriminant is

<u>Example</u>: How many roots does each equation have?

| $f(x) = -2x^2 + 12x - 18$ | $g(x) = 2x^2 + 6x - 8$ | $h(x) = x^2 - 4x + 7$ |

Using a and k