**DIRECTIONS:** The discriminant is found by using the formula **b2-4ac**. Find the discriminant for the following equations then sketch a rough graph *without using a calculator*. Answer al the questions about the discriminant.

1. 2x2 – 7x + 3
Find the discriminant:

Is the discriminant positive, zero, or negative?

How many roots or zeroes does this quadratic equation have?



1. 2x2 – 9
Find the discriminant:

Is the discriminant positive, zero, or negative?

How many roots or zeroes does this quadratic equation have?

1. 2x2 – x + 3
Find the discriminant:

Is the discriminant positive, zero, or negative?

How many roots or zeroes does this quadratic equation have?

1. x2 + 4x + 5
Find the discriminant:

Is the discriminant positive, zero, or negative?

How many roots or zeroes does this quadratic equation have?

1. x2 + 4x + 4
Find the discriminant:

Is the discriminant positive, zero, or negative?

How many roots or zeroes does this quadratic equation have?

1. x2 + 8x + 16
Find the discriminant:

Is the discriminant positive, zero, or negative?

How many roots or zeroes does this quadratic equation have?

1. Discriminants tell us how many roots a quadratic equation has. How many roots do positive discriminants have? Negative discriminants? How many roots do discriminants with a value of zero have?