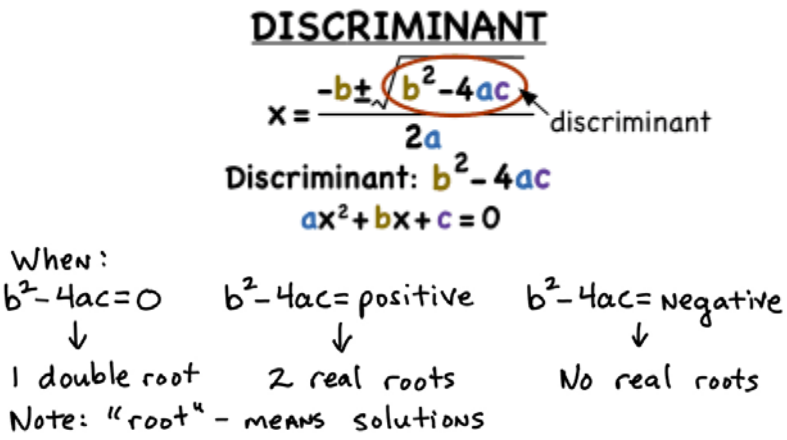

The discriminant is the part of the quadratic formula under (not including) the square root. It determines what kind of solutions you will get.

If the number under the square root is negative, you'll get imaginary answers (two of them).

If the number under the square root is positive, you'll get real numbers (two of them).

If the number under the square root is zero, you'll end up adding zero and subtracting zero, which give you the same thing, so you get only one answer.

Find the discriminant of each quadratic equation then state the numberof real and imaginary solutions.

7) $9n^2 - 3n - 8 = -10$

8) $-2x^2 - 8x - 14 = -6$

9) $9m^2 + 6m + 6 = 5$

10) $4a^2 = 8a - 4$

11) $-9b^2 = -8b + 8$

12) $-x^2 - 9 = 6x$