

4.6 Quadratic Formula and the Discriminant
Honors Algebra 2

Quadratic Formula:

1. Solve each equation using the quadratic formula.

a. $x^2 - 4x = -1$

b. $f(x) = 3x^2 + 5x + 4$

Discriminant:

Solutions of Quadratic Equations when a , b , and c are integers

Discriminant	Number of Solutions	Type of Solutions
Positive, perfect square		
Positive, but not a perfect square		
Zero		
Negative		

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6. Evaluate the discriminant for each equation. Then use it to determine the number of distinct solutions, and tell whether they are rational, irrational, or nonreal complex numbers. (Do not solve the equation).

a. $x^2 + 4x + 4 = 0$

b. $8x^2 = -14x - 3$

c. $2x^2 + 4x + 1 = 0$