

Name:

Period:

Date:

Practice Worksheet: Quadratic Formula

Find the discriminant of each quadratic equation. Then use the discriminant to describe the solutions as one real, two real, or two imaginary. Show your work. Hint: Rewrite the equations in standard form first.

1] $8x(2x - 1) = -1$	2] $7x^2 - 5 = 2x + 9x^2$	3] $8x - 10 = x^2 - 7x + 3$
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Use the quadratic formula to solve the equation. Show your work. Simplify the answer(s) completely.

4] $x^2 - 4x - 5 = 0$	5] $x^2 - 16x + 7 = 0$	6] $4x^2 - 8x + 1 = 0$
7] $6 - 2x^2 = 9x + 15$	8] $x(x + 6) = -15$	9] $-3x^2 = 2(3x - 5)$

Solve the problem using each method specified. Show all work.

10] $x^2 - 2x - 3 = 0$ Solve by factoring.	11] $x^2 - 2x - 3 = 0$ Solve by completing the square.	12] $x^2 - 2x - 3 = 0$ Solve using the quadratic formula.
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Solve the quadratic equations below using ANY method. Show your work.

13] $(2x + 8)(3x - 6) = 0$	14] $5x^2 - 10x = 7x^2 + 17$	15] $\frac{x^2}{81} - 6 = -2$
16] $7(x - 4)^2 - 2 = 54$	17] $7x^2 + 10x = 2x^2 + 155$	18] $10x^2 - 15x = 0$

19] $x^2 + 16x + c = 0$ What is the value of c if the discriminant is 0?	20] $2x^2 + 5x + c = 0$ What is the value of c if the discriminant is -23?
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