

## Quadratic Formula 1

Use the quadratic formula to solve the equation. (Warm-up)

1)  $x^2 + 12x + 32 = 0$

1) \_\_\_\_\_

2)  $x^2 + 12x + 36 = 0$

2) \_\_\_\_\_

3)  $2x^2 - 5x - 7 = 0$

3) \_\_\_\_\_

4)  $25k^2 - 4 = 0$

4) \_\_\_\_\_

Use the discriminant to determine the number and type of solutions of the equation.

5)  $x^2 - 7x + 6 = 0$

5) \_\_\_\_\_

6)  $x^2 - 12x + 36 = 0$

6) \_\_\_\_\_

7)  $x^2 + 6x - 4 = 0$

7) \_\_\_\_\_

8)  $x^2 + 2x + 8 = 0$

8) \_\_\_\_\_

Use the quadratic formula to solve the equation.

9)  $x^2 + 16x + 43 = 0$

9) \_\_\_\_\_

10)  $x^2 - 8x + 52 = 0$

10) \_\_\_\_\_

11)  $5x^2 + 12x + 5 = 0$

11) \_\_\_\_\_

12)  $4x^2 - 3x + 1 = 0$

12) \_\_\_\_\_

13)  $5x^2 + 20x = -14$

13) \_\_\_\_\_

14)  $x(x + 10) = 3$

14) \_\_\_\_\_

15)  $x^2 + 4x - 1 = 0$

15) \_\_\_\_\_

16)  $p^2 + 5p - 5 = 0$

16) \_\_\_\_\_

## Answer Key

Testname: QUADFORMULA1

1)  $-8, -4$

2)  $-6$

3)  $\frac{7}{2}, -1$

4)  $\frac{2}{5}, -\frac{2}{5}$

5) two real solutions

6) one real solution

7) two real solutions

8) two complex but not real solutions

9)  $-8 - \sqrt{21}, -8 + \sqrt{21}$

10)  $4 - 6i, 4 + 6i$

11)  $\frac{-6 - \sqrt{11}}{5}, \frac{-6 + \sqrt{11}}{5}$

12)  $\frac{3 - i\sqrt{7}}{8}, \frac{3 + i\sqrt{7}}{8}$

13)  $\frac{-10 - \sqrt{30}}{5}, \frac{-10 + \sqrt{30}}{5}$

14)  $-5 - 2\sqrt{7}, -5 + 2\sqrt{7}$

15)  $-2 \pm \sqrt{5}$

16)  $\frac{-5 \pm 3\sqrt{5}}{2}$