

## Solving Using the Quadratic Formula Worksheet

The Quadratic Formula: For quadratic equations:  $ax^2 + bx + c = 0$ ,

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Solve each equation using the Quadratic Formula.

1.  $4x^2 + 11x - 20 = 0$

2.  $x^2 - 5x - 24 = 0$

3.  $x^2 = 3x + 3$

4.  $x^2 + 5 = -5x$

5.  $x^2 = -x + 1$

6.  $4x^2 - 1 = -8x$

7.  $4x^2 + 7x - 15 = 0$

8.  $x^2 + 3x - 10 = 0$

9.  $x^2 = x + 3$

10.  $2x^2 + 23 = 14x$

11.  $x^2 = 2x + 48$

12.  $2x^2 + 39 = -18x$

13.  $5x^2 + 3x + 1 = 0$

14.  $5x^2 + 50x = -125$

Answers:

1.  $x = \frac{5}{4}, x = -4$

2.  $x = 8, x = -3$

3.  $x = \frac{3 \pm \sqrt{21}}{2}$

4.  $x = \frac{-5 \pm \sqrt{5}}{2}$

5.  $x = \frac{-1 \pm \sqrt{5}}{2}$

6.  $x = \frac{-2 \pm \sqrt{5}}{2}$

7.  $x = \frac{5}{4}, x = -3$

8.  $x = 2, x = -5$

9.  $x = \frac{1 \pm \sqrt{13}}{2}$

10.  $x = \frac{7 \pm \sqrt{3}}{2}$

11.  $x = 8, x = -6$

12.  $x = \frac{-9 \pm \sqrt{3}}{2}$

13.  $x = \text{not a real number}$

14.  $x = -5$