

# Solving Quadratic Equations (J)

Solve each equation for x

1.  $24x^2 + 10x - 7 = 14$

7.  $7x^2 + 44x + 8 = -37$

2.  $5x^2 - 46x + 5 = -4$

8.  $36x^2 + 35x - 2 = 47$

3.  $16x^2 - 16x + 1 = -2$

9.  $20x^2 - 39x = -7$

4.  $6x^2 - 27x + 15 = -12$

10.  $20x^2 - 62x + 47 = -1$

5.  $28x^2 + 69x + 25 = -10$

11.  $16x^2 + 6x - 4 = 6$

6.  $30x^2 + 19x - 4 = 1$

12.  $7x^2 + 22x + 7 = -9$

# Solving Quadratic Equations (J) Answers

Solve each equation for x

1.  $24x^2 + 10x - 7 = 14$   
 $24x^2 + 10x - 21 = 0$   
 $(4x - 3)(6x + 7) = 0$   
 $x = 3/4, -1 \frac{1}{6}$

2.  $5x^2 - 46x + 5 = -4$   
 $5x^2 - 46x + 9 = 0$   
 $(x - 9)(5x - 1) = 0$   
 $x = 9, 1/5$

3.  $16x^2 - 16x + 1 = -2$   
 $16x^2 - 16x + 3 = 0$   
 $(4x - 3)(4x - 1) = 0$   
 $x = 3/4, 1/4$

4.  $6x^2 - 27x + 15 = -12$   
 $6x^2 - 27x + 27 = 0$   
 $(x - 3)(6x - 9) = 0$   
 $x = 3, 1 \frac{1}{2}$

5.  $28x^2 + 69x + 25 = -10$   
 $28x^2 + 69x + 35 = 0$   
 $(7x + 5)(4x + 7) = 0$   
 $x = -5/7, -1 \frac{3}{4}$

6.  $30x^2 + 19x - 4 = 1$   
 $30x^2 + 19x - 5 = 0$   
 $(6x + 5)(5x - 1) = 0$   
 $x = -5/6, 1/5$

7.  $7x^2 + 44x + 8 = -37$   
 $7x^2 + 44x + 45 = 0$   
 $(7x + 9)(x + 5) = 0$   
 $x = -1 \frac{2}{7}, -5$

8.  $36x^2 + 35x - 2 = 47$   
 $36x^2 + 35x - 49 = 0$   
 $(4x + 7)(9x - 7) = 0$   
 $x = -1 \frac{3}{4}, 7/9$

9.  $20x^2 - 39x = -7$   
 $20x^2 - 39x + 7 = 0$   
 $(5x - 1)(4x - 7) = 0$   
 $x = 1/5, 1 \frac{3}{4}$

10.  $20x^2 - 62x + 47 = -1$   
 $20x^2 - 62x + 48 = 0$   
 $(5x - 8)(4x - 6) = 0$   
 $x = 1 \frac{3}{5}, 1 \frac{1}{2}$

11.  $16x^2 + 6x - 4 = 6$   
 $16x^2 + 6x - 10 = 0$   
 $(8x - 5)(2x + 2) = 0$   
 $x = 5/8, -1$

12.  $7x^2 + 22x + 7 = -9$   
 $7x^2 + 22x + 16 = 0$   
 $(7x + 8)(x + 2) = 0$   
 $x = -1 \frac{1}{7}, -2$