

# Solving Quadratic Equations (H)

Solve each equation for x

1.  $x^2 - 5x - 10 = 14$

7.  $x^2 + 6x - 6 = 10$

2.  $4x^2 - 30x + 18 = -36$

8.  $x^2 - 6x - 14 = 13$

3.  $2x^2 + 8x + 2 = -4$

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

4.  $4x^2 + 16x = -7$

10.  $x^2 - 10x + 15 = -6$

5.  $x^2 - 16x + 44 = -19$

11.  $4x^2 - 31 = 5$

6.  $2x^2 + 18x + 3 = -13$

12.  $2x^2 + 9x - 17 = 1$

# Solving Quadratic Equations (H) Answers

Solve each equation for x

1.  $x^2 - 5x - 10 = 14$   
 $x^2 - 5x - 24 = 0$   
 $(x + 3)(x - 8) = 0$   
 $x = -3, 8$

2.  $4x^2 - 30x + 18 = -36$   
 $4x^2 - 30x + 54 = 0$   
 $(2x - 6)(2x - 9) = 0$   
 $x = 3, 4\frac{1}{2}$

3.  $2x^2 + 8x + 2 = -4$   
 $2x^2 + 8x + 6 = 0$   
 $(2x + 6)(x + 1) = 0$   
 $x = -3, -1$

4.  $4x^2 + 16x = -7$   
 $4x^2 + 16x + 7 = 0$   
 $(2x + 7)(2x + 1) = 0$   
 $x = -3\frac{1}{2}, -\frac{1}{2}$

5.  $x^2 - 16x + 44 = -19$   
 $x^2 - 16x + 63 = 0$   
 $(x - 9)(x - 7) = 0$   
 $x = 9, 7$

6.  $2x^2 + 18x + 3 = -13$   
 $2x^2 + 18x + 16 = 0$   
 $(2x + 2)(x + 8) = 0$   
 $x = -1, -8$

7.  $x^2 + 6x - 6 = 10$   
 $x^2 + 6x - 16 = 0$   
 $(x + 8)(x - 2) = 0$   
 $x = -8, 2$

8.  $x^2 - 6x - 14 = 13$   
 $x^2 - 6x - 27 = 0$   
 $(x - 9)(x + 3) = 0$   
 $x = 9, -3$

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

10.  $x^2 - 10x + 15 = -6$   
 $x^2 - 10x + 21 = 0$   
 $(x - 3)(x - 7) = 0$   
 $x = 3, 7$

11.  $4x^2 - 31 = 5$   
 $4x^2 - 36 = 0$   
 $(2x - 6)(2x + 6) = 0$   
 $x = 3, -3$

12.  $2x^2 + 9x - 17 = 1$   
 $2x^2 + 9x - 18 = 0$   
 $(x + 6)(2x - 3) = 0$   
 $x = -6, 1\frac{1}{2}$