

# Solving Quadratic Equations (H)

Solve each equation for x

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

7.  $x^2 + 4x - 31 = 14$

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

8.  $x^2 - 3x - 1 = 17$

3.  $-x^2 - 17x - 41 = 31$

9.  $-x^2 + 6x + 6 = -21$

4.  $-x^2 - 10x - 1 = 20$

10.  $-x^2 + 14x - 13 = 36$

5.  $x^2 - 15x + 48 = -8$

11.  $-x^2 + 3x + 25 = -3$

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

12.  $x^2 - x - 3 = 27$

# Solving Quadratic Equations (H) Answers

Solve each equation for x

1.  $x^2 - 7x + 6 = -6$   
 $x^2 - 7x + 12 = 0$   
 $(x - 4)(x - 3) = 0$   
 $x = 4, 3$

7.  $x^2 + 4x - 31 = 14$   
 $x^2 + 4x - 45 = 0$   
 $(x + 9)(x - 5) = 0$   
 $x = -9, 5$

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

8.  $x^2 - 3x - 1 = 17$   
 $x^2 - 3x - 18 = 0$   
 $(x - 6)(x + 3) = 0$   
 $x = 6, -3$

3.  $-x^2 - 17x - 41 = 31$   
 $-x^2 - 17x - 72 = 0$   
 $(x + 8)(x + 9) = 0$   
 $x = -8, -9$

9.  $-x^2 + 6x + 6 = -21$   
 $-x^2 + 6x + 27 = 0$   
 $-(x + 3)(x - 9) = 0$   
 $x = -3, 9$

4.  $-x^2 - 10x - 1 = 20$   
 $-x^2 - 10x - 21 = 0$   
 $-(x + 7)(x + 3) = 0$   
 $x = -7, -3$

10.  $-x^2 + 14x - 13 = 36$   
 $-x^2 + 14x - 49 = 0$   
 $-(x - 7)(x - 7) = 0$   
 $x = 7$

5.  $x^2 - 15x + 48 = -8$   
 $x^2 - 15x + 56 = 0$   
 $(x - 7)(x - 8) = 0$   
 $x = 7, 8$

11.  $-x^2 + 3x + 25 = -3$   
 $-x^2 + 3x + 28 = 0$   
 $-(x + 4)(x - 7) = 0$   
 $x = -4, 7$

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

12.  $x^2 - x - 3 = 27$   
 $x^2 - x - 30 = 0$   
 $(x - 6)(x + 5) = 0$   
 $x = 6, -5$