

**QUADRATIC EQUATIONS PRACTICE:  
SOLVE BY FACTORING**

**COMPLIMENTS:  
WWW.MATHHUB.CLUB**

**EXPLORE.**

**SOLVE.**

**LEARN. LOVE.**

# Quadratic Equations Practice Worksheet 1

Solve by factoring. Show all work for full credit.

1.  $x^2 + 5x + 6 = 0$

11.  $x^2 - 5x + 6 = 0$

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

12.  $2x^2 - 4x - 16 = 0$

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

13.  $x^2 + x - 20 = 0$

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

14.  $x^2 - 6x + 9 = 0$

5.  $2x^2 - 6x - 20 = 0$

15.  $3x^2 - 3x - 18 = 0$

6.  $x^2 + 4x - 21 = 0$

16.  $x^2 + 3x - 18 = 0$

7.  $3x^2 + 9x - 30 = 0$

17.  $2x^2 + 8x - 10 = 0$

8.  $x^2 - 2x - 15 = 0$

18.  $x^2 - x - 12 = 0$

9.  $2x^2 + 10x + 12 = 0$

19.  $3x^2 + 12x + 12 = 0$

10.  $x^2 + 6x + 9 = 0$

20.  $x^2 + 10x + 25 = 0$

**MathHub.Club**

# Quadratic Equations Practice Worksheet 1

## Answers

Solve by factoring. Show all work for full credit.

1.  $2x^2 - 6x - 20 = 0;$   
 $2(x - 5)(x + 2) = 0;$   
 $x - 5 = 0; x + 2 = 0;$   
Solutions:  $x = 5, -2$

2.  $x^2 - 3x - 10 = 0;$   
 $(x - 5)(x + 2) = 0;$   
 $x - 5 = 0; x + 2 = 0;$   
Solutions:  $x = 5, -2$

3.  $x^2 + 2x - 8 = 0;$   
 $(x - 2)(x + 4) = 0;$   
 $x - 2 = 0; x + 4 = 0;$   
Solutions:  $x = 2, -4$

4.  $x^2 - 4x + 4 = 0;$   
 $(x - 2)^2 = 0;$   
 $x - 2 = 0;$   
Solutions:  $x = 2$

5.  $2x^2 - 6x - 20 = 0;$   
 $2(x - 5)(x + 2) = 0;$   
 $x - 5 = 0; x + 2 = 0;$   
Solutions:  $x = 5, -2$

6.  $x^2 + 4x - 21 = 0;$   
 $(x - 3)(x + 7) = 0;$   
 $x - 3 = 0; x + 7 = 0;$   
Solutions:  $x = 3, -7$

7.  $3x^2 + 9x - 30 = 0;$   
 $3(x - 2)(x + 5) = 0;$   
 $x - 2 = 0; x + 5 = 0;$   
Solutions:  $x = 2, -5$

8.  $x^2 - 2x - 15 = 0;$   
 $(x - 5)(x + 3) = 0;$   
 $x - 5 = 0; x + 3 = 0;$   
Solutions:  $x = 5, -3$

9.  $2x^2 + 10x + 12 = 0;$   
 $2(x + 2)(x + 3) = 0;$   
 $x + 2 = 0; x + 3 = 0;$   
Solutions:  $x = -2, -3$

10.  $x^2 + 6x + 9 = 0;$   
 $(x + 3)^2 = 0;$   
 $x + 3 = 0;$   
Solutions:  $x = -3$

$$\begin{aligned}
11. \quad & x^2 - 5x + 6 = 0; \\
& (x - 3)(x - 2) = 0; \\
& x - 3 = 0; \quad x - 2 = 0; \\
& \text{Solutions: } x = 3, 2
\end{aligned}$$

$$\begin{aligned}
12. \quad & 2x^2 - 4x - 16 = 0; \\
& 2(x - 4)(x + 2) = 0; \\
& x - 4 = 0; \quad x + 2 = 0; \\
& \text{Solutions: } x = 4, -2
\end{aligned}$$

$$\begin{aligned}
13. \quad & x^2 + x - 20 = 0; \\
& (x - 4)(x + 5) = 0; \\
& x - 4 = 0; \quad x + 5 = 0; \\
& \text{Solutions: } x = 4, -5
\end{aligned}$$

$$\begin{aligned}
14. \quad & x^2 - 6x + 9 = 0; \\
& (x - 3)^2 = 0; \\
& x - 3 = 0; \\
& \text{Solutions: } x = 3
\end{aligned}$$

$$\begin{aligned}
15. \quad & 3x^2 - 3x - 18 = 0; \\
& 3(x - 3)(x + 2) = 0; \\
& x - 3 = 0; \quad x + 2 = 0; \\
& \text{Solutions: } x = 3, -2
\end{aligned}$$

$$\begin{aligned}
16. \quad & x^2 + 3x - 18 = 0; \\
& (x - 3)(x + 6) = 0; \\
& x - 3 = 0; \quad x + 6 = 0; \\
& \text{Solutions: } x = 3, -6
\end{aligned}$$

$$\begin{aligned}
17. \quad & 2x^2 + 8x - 10 = 0; \\
& 2(x - 1)(x + 5) = 0; \\
& x - 1 = 0; \quad x + 5 = 0; \\
& \text{Solutions: } x = 1, -5
\end{aligned}$$

$$\begin{aligned}
18. \quad & x^2 - x - 12 = 0; \\
& (x - 4)(x + 3) = 0; \\
& x - 4 = 0; \quad x + 3 = 0; \\
& \text{Solutions: } x = 4, -3
\end{aligned}$$

$$\begin{aligned}
19. \quad & 3x^2 + 12x + 12 = 0; \\
& 3(x + 2)^2 = 0; \\
& x + 2 = 0; \\
& \text{Solutions: } x = -2
\end{aligned}$$

$$\begin{aligned}
20. \quad & x^2 + 10x + 25 = 0; \\
& (x + 5)^2 = 0; \\
& x + 5 = 0; \\
& \text{Solutions: } x = -5
\end{aligned}$$