

**QUADRATIC EQUATIONS PRACTICE:
SOLVE BY FACTORING**

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

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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: $x = -3$

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

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

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

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

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

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

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

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

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

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

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