

Solving Quadratic Equations (J)

Name: _____

Date: _____

Solve each equation for x.

1. $-3x^2 + 6x + 45 = 0$

11. $4x^2 + 52x + 168 = 0$

2. $2x^2 - 22x + 48 = 0$

12. $-4x^2 + 28x - 24 = 0$

3. $-4x^2 + 4x + 24 = 0$

13. $3x^2 - 18x - 21 = 0$

4. $-2x^2 - 24x - 70 = 0$

14. $-5x^2 + 20x + 160 = 0$

5. $3x^2 - 27x + 60 = 0$

15. $3x^2 - 15x - 42 = 0$

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

16. $3x^2 + 36x + 108 = 0$

7. $2x^2 - 12x - 54 = 0$

17. $2x^2 - 14x + 24 = 0$

8. $-3x^2 - 9x - 6 = 0$

18. $-4x^2 + 36x - 32 = 0$

9. $2x^2 + 32x + 126 = 0$

19. $-3x^2 + 33x - 54 = 0$

10. $-2x^2 - 18x - 16 = 0$

20. $3x^2 + 27x + 54 = 0$

Solving Quadratic Equations (J) Answers

Name: _____

Date: _____

Solve each equation for x.

1. $-3x^2 + 6x + 45 = 0$
 $-3(x - 5)(x + 3) = 0$
 $x = 5, -3$

2. $2x^2 - 22x + 48 = 0$
 $2(x - 3)(x - 8) = 0$
 $x = 3, 8$

3. $-4x^2 + 4x + 24 = 0$
 $-4(x + 2)(x - 3) = 0$
 $x = -2, 3$

4. $-2x^2 - 24x - 70 = 0$
 $-2(x + 7)(x + 5) = 0$
 $x = -7, -5$

5. $3x^2 - 27x + 60 = 0$
 $3(x - 4)(x - 5) = 0$
 $x = 4, 5$

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

7. $2x^2 - 12x - 54 = 0$
 $2(x - 9)(x + 3) = 0$
 $x = 9, -3$

8. $-3x^2 - 9x - 6 = 0$
 $-3(x + 1)(x + 2) = 0$
 $x = -1, -2$

9. $2x^2 + 32x + 126 = 0$
 $2(x + 7)(x + 9) = 0$
 $x = -7, -9$

10. $-2x^2 - 18x - 16 = 0$
 $-2(x + 8)(x + 1) = 0$
 $x = -8, -1$

11. $4x^2 + 52x + 168 = 0$
 $4(x + 7)(x + 6) = 0$
 $x = -7, -6$

12. $-4x^2 + 28x - 24 = 0$
 $-4(x - 1)(x - 6) = 0$
 $x = 1, 6$

13. $3x^2 - 18x - 21 = 0$
 $3(x - 7)(x + 1) = 0$
 $x = 7, -1$

14. $-5x^2 + 20x + 160 = 0$
 $-5(x + 4)(x - 8) = 0$
 $x = -4, 8$

15. $3x^2 - 15x - 42 = 0$
 $3(x - 7)(x + 2) = 0$
 $x = 7, -2$

16. $3x^2 + 36x + 108 = 0$
 $3(x + 6)(x + 6) = 3(x + 6)^2 = 0$
 $x = -6$

17. $2x^2 - 14x + 24 = 0$
 $2(x - 4)(x - 3) = 0$
 $x = 4, 3$

18. $-4x^2 + 36x - 32 = 0$
 $-4(x - 8)(x - 1) = 0$
 $x = 8, 1$

19. $-3x^2 + 33x - 54 = 0$
 $-3(x - 2)(x - 9) = 0$
 $x = 2, 9$

20. $3x^2 + 27x + 54 = 0$
 $3(x + 3)(x + 6) = 0$
 $x = -3, -6$