

Solving Quadratic Equations (J)

Name: _____

Date: _____

Solve each equation for x.

1. $5x^2 + 7x + 2 = 0$

11. $3x^2 - 4x - 7 = 0$

2. $4x^2 - 12x - 7 = 0$

12. $5x^2 + 12x - 32 = 0$

3. $2x^2 + 19x + 35 = 0$

13. $2x^2 + 11x + 15 = 0$

4. $4x^2 + 20x + 25 = 0$

14. $2x^2 - 15x + 18 = 0$

5. $5x^2 + 33x - 56 = 0$

15. $5x^2 + 23x - 10 = 0$

6. $3x^2 + 13x - 10 = 0$

16. $2x^2 + 5x - 12 = 0$

7. $x^2 + 12x + 27 = 0$

17. $x^2 + 5x - 24 = 0$

8. $3x^2 + 29x + 40 = 0$

18. $4x^2 + 45x + 81 = 0$

9. $5x^2 - 26x + 5 = 0$

19. $4x^2 + 24x + 27 = 0$

10. $4x^2 + 33x - 27 = 0$

20. $4x^2 - 39x + 56 = 0$

Solving Quadratic Equations (J) Answers

Name: _____

Date: _____

Solve each equation for x.

1. $5x^2 + 7x + 2 = 0$

$$(x + 1)(5x + 2) = 0$$

$$x = -1, -\frac{2}{5}$$

2. $4x^2 - 12x - 7 = 0$

$$(2x + 1)(2x - 7) = 0$$

$$x = -\frac{1}{2}, 3\frac{1}{2}$$

3. $2x^2 + 19x + 35 = 0$

$$(x + 7)(2x + 5) = 0$$

$$x = -7, -2\frac{1}{2}$$

4. $4x^2 + 20x + 25 = 0$

$$(2x + 5)(2x + 5) = (2x + 5)^2 = 0$$

$$x = -2\frac{1}{2}$$

5. $5x^2 + 33x - 56 = 0$

$$(5x - 7)(x + 8) = 0$$

$$x = 1\frac{2}{5}, -8$$

6. $3x^2 + 13x - 10 = 0$

$$(x + 5)(3x - 2) = 0$$

$$x = -5, \frac{2}{3}$$

7. $x^2 + 12x + 27 = 0$

$$(x + 3)(x + 9) = 0$$

$$x = -3, -9$$

8. $3x^2 + 29x + 40 = 0$

$$(x + 8)(3x + 5) = 0$$

$$x = -8, -1\frac{2}{3}$$

9. $5x^2 - 26x + 5 = 0$

$$(x - 5)(5x - 1) = 0$$

$$x = 5, \frac{1}{5}$$

10. $4x^2 + 33x - 27 = 0$

$$(4x - 3)(x + 9) = 0$$

$$x = \frac{3}{4}, -9$$

11. $3x^2 - 4x - 7 = 0$

$$(x + 1)(3x - 7) = 0$$

$$x = -1, 2\frac{1}{3}$$

12. $5x^2 + 12x - 32 = 0$

$$(5x - 8)(x + 4) = 0$$

$$x = 1\frac{3}{5}, -4$$

13. $2x^2 + 11x + 15 = 0$

$$(x + 3)(2x + 5) = 0$$

$$x = -3, -2\frac{1}{2}$$

14. $2x^2 - 15x + 18 = 0$

$$(2x - 3)(x - 6) = 0$$

$$x = 1\frac{1}{2}, 6$$

15. $5x^2 + 23x - 10 = 0$

$$(5x - 2)(x + 5) = 0$$

$$x = \frac{2}{5}, -5$$

16. $2x^2 + 5x - 12 = 0$

$$(2x - 3)(x + 4) = 0$$

$$x = 1\frac{1}{2}, -4$$

17. $x^2 + 5x - 24 = 0$

$$(x - 3)(x + 8) = 0$$

$$x = 3, -8$$

18. $4x^2 + 45x + 81 = 0$

$$(x + 9)(4x + 9) = 0$$

$$x = -9, -2\frac{1}{4}$$

19. $4x^2 + 24x + 27 = 0$

$$(2x + 9)(2x + 3) = 0$$

$$x = -4\frac{1}{2}, -1\frac{1}{2}$$

20. $4x^2 - 39x + 56 = 0$

$$(4x - 7)(x - 8) = 0$$

$$x = 1\frac{3}{4}, 8$$