

Solving Quadratic Equations (C)

Name: _____

Date: _____

Solve each equation for x.

1. $3x^2 + 26x + 16 = 0$

11. $4x^2 - 16x + 7 = 0$

2. $-3x^2 - 23x + 8 = 0$

12. $-3x^2 + 19x + 40 = 0$

3. $4x^2 + 28x + 49 = 0$

13. $4x^2 - 24x + 35 = 0$

4. $x^2 - 6x - 7 = 0$

14. $-4x^2 - 12x + 27 = 0$

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

15. $4x^2 - 35x - 9 = 0$

6. $2x^2 + 13x + 6 = 0$

16. $2x^2 - 3x - 5 = 0$

7. $-3x^2 - 20x + 63 = 0$

17. $-4x^2 + 8x + 21 = 0$

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

18. $3x^2 + 14x - 24 = 0$

9. $3x^2 + x - 14 = 0$

19. $-4x^2 + 13x - 3 = 0$

10. $-3x^2 + 11x - 6 = 0$

20. $-3x^2 - 19x - 6 = 0$

Solving Quadratic Equations (C) Answers

Name: _____

Date: _____

Solve each equation for x.

1. $3x^2 + 26x + 16 = 0$

$$(3x + 2)(x + 8) = 0$$

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

2. $-3x^2 - 23x + 8 = 0$

$$-(x + 8)(3x - 1) = 0$$

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

3. $4x^2 + 28x + 49 = 0$

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

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

4. $x^2 - 6x - 7 = 0$

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

$$x = -1, 7$$

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

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

$$x = 2, -4$$

6. $2x^2 + 13x + 6 = 0$

$$(2x + 1)(x + 6) = 0$$

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

7. $-3x^2 - 20x + 63 = 0$

$$-(3x - 7)(x + 9) = 0$$

$$x = 2\frac{1}{3}, -9$$

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

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

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

9. $3x^2 + x - 14 = 0$

$$(3x + 7)(x - 2) = 0$$

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

10. $-3x^2 + 11x - 6 = 0$

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

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

11. $4x^2 - 16x + 7 = 0$

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

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

12. $-3x^2 + 19x + 40 = 0$

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

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

13. $4x^2 - 24x + 35 = 0$

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

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

14. $-4x^2 - 12x + 27 = 0$

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

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

15. $4x^2 - 35x - 9 = 0$

$$(4x + 1)(x - 9) = 0$$

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

16. $2x^2 - 3x - 5 = 0$

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

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

17. $-4x^2 + 8x + 21 = 0$

$$-(2x - 7)(2x + 3) = 0$$

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

18. $3x^2 + 14x - 24 = 0$

$$(3x - 4)(x + 6) = 0$$

$$x = 1\frac{1}{3}, -6$$

19. $-4x^2 + 13x - 3 = 0$

$$-(x - 3)(4x - 1) = 0$$

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

20. $-3x^2 - 19x - 6 = 0$

$$-(3x + 1)(x + 6) = 0$$

$$x = -\frac{1}{3}, -6$$