

Solving Quadratic Equations (A)

Name: _____

Date: _____

Solve each equation for x.

1. $3x^2 - 4x - 7 = 0$

11. $4x^2 + 9x - 9 = 0$

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

12. $5x^2 + 33x - 14 = 0$

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

13. $3x^2 - 11x - 42 = 0$

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

14. $2x^2 - 7x + 6 = 0$

5. $4x^2 - 3x - 10 = 0$

15. $2x^2 - 9x - 5 = 0$

6. $2x^2 - 9x - 18 = 0$

16. $2x^2 + 7x + 3 = 0$

7. $2x^2 + 25x + 72 = 0$

17. $4x^2 + 28x + 49 = 0$

8. $4x^2 - 41x + 45 = 0$

18. $3x^2 + x - 10 = 0$

9. $5x^2 - 36x - 32 = 0$

19. $5x^2 + 42x + 49 = 0$

10. $4x^2 + 27x - 40 = 0$

20. $4x^2 + 31x + 21 = 0$

Solving Quadratic Equations (A) Answers

Name: _____

Date: _____

Solve each equation for x.

1. $3x^2 - 4x - 7 = 0$
 $(3x - 7)(x + 1) = 0$
 $x = 2\frac{1}{3}, -1$

2. $4x^2 - 15x + 9 = 0$
 $(4x - 3)(x - 3) = 0$
 $x = \frac{3}{4}, 3$

3. $3x^2 + 8x - 3 = 0$
 $(x + 3)(3x - 1) = 0$
 $x = -3, \frac{1}{3}$

4. $4x^2 - 35x + 24 = 0$
 $(4x - 3)(x - 8) = 0$
 $x = \frac{3}{4}, 8$

5. $4x^2 - 3x - 10 = 0$
 $(4x + 5)(x - 2) = 0$
 $x = -1\frac{1}{4}, 2$

6. $2x^2 - 9x - 18 = 0$
 $(2x + 3)(x - 6) = 0$
 $x = -1\frac{1}{2}, 6$

7. $2x^2 + 25x + 72 = 0$
 $(x + 8)(2x + 9) = 0$
 $x = -8, -4\frac{1}{2}$

8. $4x^2 - 41x + 45 = 0$
 $(4x - 5)(x - 9) = 0$
 $x = 1\frac{1}{4}, 9$

9. $5x^2 - 36x - 32 = 0$
 $(5x + 4)(x - 8) = 0$
 $x = -\frac{4}{5}, 8$

10. $4x^2 + 27x - 40 = 0$
 $(4x - 5)(x + 8) = 0$
 $x = 1\frac{1}{4}, -8$

11. $4x^2 + 9x - 9 = 0$
 $(4x - 3)(x + 3) = 0$
 $x = \frac{3}{4}, -3$

12. $5x^2 + 33x - 14 = 0$
 $(5x - 2)(x + 7) = 0$
 $x = \frac{2}{5}, -7$

13. $3x^2 - 11x - 42 = 0$
 $(x - 6)(3x + 7) = 0$
 $x = 6, -2\frac{1}{3}$

14. $2x^2 - 7x + 6 = 0$
 $(x - 2)(2x - 3) = 0$
 $x = 2, 1\frac{1}{2}$

15. $2x^2 - 9x - 5 = 0$
 $(2x + 1)(x - 5) = 0$
 $x = -\frac{1}{2}, 5$

16. $2x^2 + 7x + 3 = 0$
 $(2x + 1)(x + 3) = 0$
 $x = -\frac{1}{2}, -3$

17. $4x^2 + 28x + 49 = 0$
 $(2x + 7)(2x + 7) = (2x + 7)^2 = 0$
 $x = -3\frac{1}{2}$

18. $3x^2 + x - 10 = 0$
 $(3x - 5)(x + 2) = 0$
 $x = 1\frac{2}{3}, -2$

19. $5x^2 + 42x + 49 = 0$
 $(5x + 7)(x + 7) = 0$
 $x = -1\frac{2}{5}, -7$

20. $4x^2 + 31x + 21 = 0$
 $(x + 7)(4x + 3) = 0$
 $x = -7, -\frac{3}{4}$

Solving Quadratic Equations (B)

Name: _____

Date: _____

Solve each equation for x.

1. $2x^2 + 7x - 9 = 0$

11. $2x^2 + 25x + 72 = 0$

2. $x^2 + 7x - 18 = 0$

12. $5x^2 + 6x - 8 = 0$

3. $3x^2 - 5x - 28 = 0$

13. $4x^2 - 17x - 15 = 0$

4. $2x^2 + 15x - 27 = 0$

14. $2x^2 - 15x + 27 = 0$

5. $2x^2 + 17x - 9 = 0$

15. $3x^2 - 4x - 32 = 0$

6. $2x^2 + 27x + 81 = 0$

16. $3x^2 + 20x - 63 = 0$

7. $4x^2 + 24x + 35 = 0$

17. $3x^2 + 11x + 10 = 0$

8. $3x^2 - 19x - 72 = 0$

18. $4x^2 + 31x + 21 = 0$

9. $2x^2 + 13x + 20 = 0$

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

10. $x^2 - 11x + 30 = 0$

20. $3x^2 + 4x - 15 = 0$

Solving Quadratic Equations (B) Answers

Name: _____

Date: _____

Solve each equation for x.

- $2x^2 + 7x - 9 = 0$
 $(x - 1)(2x + 9) = 0$
 $x = 1, -4\frac{1}{2}$
- $x^2 + 7x - 18 = 0$
 $(x + 9)(x - 2) = 0$
 $x = -9, 2$
- $3x^2 - 5x - 28 = 0$
 $(x - 4)(3x + 7) = 0$
 $x = 4, -2\frac{1}{3}$
- $2x^2 + 15x - 27 = 0$
 $(x + 9)(2x - 3) = 0$
 $x = -9, 1\frac{1}{2}$
- $2x^2 + 17x - 9 = 0$
 $(2x - 1)(x + 9) = 0$
 $x = \frac{1}{2}, -9$
- $2x^2 + 27x + 81 = 0$
 $(x + 9)(2x + 9) = 0$
 $x = -9, -4\frac{1}{2}$
- $4x^2 + 24x + 35 = 0$
 $(2x + 5)(2x + 7) = 0$
 $x = -2\frac{1}{2}, -3\frac{1}{2}$
- $3x^2 - 19x - 72 = 0$
 $(3x + 8)(x - 9) = 0$
 $x = -2\frac{2}{3}, 9$
- $2x^2 + 13x + 20 = 0$
 $(2x + 5)(x + 4) = 0$
 $x = -2\frac{1}{2}, -4$
- $x^2 - 11x + 30 = 0$
 $(x - 5)(x - 6) = 0$
 $x = 5, 6$
- $2x^2 + 25x + 72 = 0$
 $(x + 8)(2x + 9) = 0$
 $x = -8, -4\frac{1}{2}$
- $5x^2 + 6x - 8 = 0$
 $(5x - 4)(x + 2) = 0$
 $x = \frac{4}{5}, -2$
- $4x^2 - 17x - 15 = 0$
 $(4x + 3)(x - 5) = 0$
 $x = -\frac{3}{4}, 5$
- $2x^2 - 15x + 27 = 0$
 $(2x - 9)(x - 3) = 0$
 $x = 4\frac{1}{2}, 3$
- $3x^2 - 4x - 32 = 0$
 $(3x + 8)(x - 4) = 0$
 $x = -2\frac{2}{3}, 4$
- $3x^2 + 20x - 63 = 0$
 $(3x - 7)(x + 9) = 0$
 $x = 2\frac{1}{3}, -9$
- $3x^2 + 11x + 10 = 0$
 $(3x + 5)(x + 2) = 0$
 $x = -1\frac{2}{3}, -2$
- $4x^2 + 31x + 21 = 0$
 $(4x + 3)(x + 7) = 0$
 $x = -\frac{3}{4}, -7$
- $4x^2 + 4x - 3 = 0$
 $(2x + 3)(2x - 1) = 0$
 $x = -1\frac{1}{2}, \frac{1}{2}$
- $3x^2 + 4x - 15 = 0$
 $(3x - 5)(x + 3) = 0$
 $x = 1\frac{2}{3}, -3$

Solving Quadratic Equations (C)

Name: _____

Date: _____

Solve each equation for x.

1. $5x^2 - 11x - 12 = 0$

11. $2x^2 + 17x + 35 = 0$

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

12. $x^2 - 17x + 72 = 0$

3. $5x^2 + 38x + 48 = 0$

13. $4x^2 - 5x + 1 = 0$

4. $4x^2 + 25x - 21 = 0$

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

5. $x^2 - x - 42 = 0$

15. $2x^2 + 7x - 72 = 0$

6. $2x^2 + 27x + 81 = 0$

16. $4x^2 + 11x - 3 = 0$

7. $3x^2 - 22x + 35 = 0$

17. $2x^2 - 19x + 9 = 0$

8. $5x^2 - 9x - 2 = 0$

18. $4x^2 + 33x + 35 = 0$

9. $4x^2 + 31x + 42 = 0$

19. $4x^2 - 13x - 12 = 0$

10. $3x^2 + 20x + 25 = 0$

20. $2x^2 + 5x - 3 = 0$

Solving Quadratic Equations (C) Answers

Name: _____

Date: _____

Solve each equation for x.

1. $5x^2 - 11x - 12 = 0$
 $(5x + 4)(x - 3) = 0$
 $x = -\frac{4}{5}, 3$

2. $3x^2 + 5x - 2 = 0$
 $(x + 2)(3x - 1) = 0$
 $x = -2, \frac{1}{3}$

3. $5x^2 + 38x + 48 = 0$
 $(x + 6)(5x + 8) = 0$
 $x = -6, -1\frac{3}{5}$

4. $4x^2 + 25x - 21 = 0$
 $(x + 7)(4x - 3) = 0$
 $x = -7, \frac{3}{4}$

5. $x^2 - x - 42 = 0$
 $(x + 6)(x - 7) = 0$
 $x = -6, 7$

6. $2x^2 + 27x + 81 = 0$
 $(2x + 9)(x + 9) = 0$
 $x = -4\frac{1}{2}, -9$

7. $3x^2 - 22x + 35 = 0$
 $(x - 5)(3x - 7) = 0$
 $x = 5, 2\frac{1}{3}$

8. $5x^2 - 9x - 2 = 0$
 $(5x + 1)(x - 2) = 0$
 $x = -\frac{1}{5}, 2$

9. $4x^2 + 31x + 42 = 0$
 $(4x + 7)(x + 6) = 0$
 $x = -1\frac{3}{4}, -6$

10. $3x^2 + 20x + 25 = 0$
 $(3x + 5)(x + 5) = 0$
 $x = -1\frac{2}{3}, -5$

11. $2x^2 + 17x + 35 = 0$
 $(x + 5)(2x + 7) = 0$
 $x = -5, -3\frac{1}{2}$

12. $x^2 - 17x + 72 = 0$
 $(x - 8)(x - 9) = 0$
 $x = 8, 9$

13. $4x^2 - 5x + 1 = 0$
 $(4x - 1)(x - 1) = 0$
 $x = \frac{1}{4}, 1$

14. $x^2 - 2x - 15 = 0$
 $(x + 3)(x - 5) = 0$
 $x = -3, 5$

15. $2x^2 + 7x - 72 = 0$
 $(x + 8)(2x - 9) = 0$
 $x = -8, 4\frac{1}{2}$

16. $4x^2 + 11x - 3 = 0$
 $(x + 3)(4x - 1) = 0$
 $x = -3, \frac{1}{4}$

17. $2x^2 - 19x + 9 = 0$
 $(2x - 1)(x - 9) = 0$
 $x = \frac{1}{2}, 9$

18. $4x^2 + 33x + 35 = 0$
 $(4x + 5)(x + 7) = 0$
 $x = -1\frac{1}{4}, -7$

19. $4x^2 - 13x - 12 = 0$
 $(x - 4)(4x + 3) = 0$
 $x = 4, -\frac{3}{4}$

20. $2x^2 + 5x - 3 = 0$
 $(x + 3)(2x - 1) = 0$
 $x = -3, \frac{1}{2}$

Solving Quadratic Equations (D)

Name: _____

Date: _____

Solve each equation for x.

1. $2x^2 - 13x + 6 = 0$

11. $5x^2 - 2x - 16 = 0$

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

12. $3x^2 - 11x - 4 = 0$

3. $4x^2 + 15x + 14 = 0$

13. $4x^2 - 11x + 6 = 0$

4. $2x^2 + 13x + 18 = 0$

14. $4x^2 + 23x - 72 = 0$

5. $4x^2 - 11x - 45 = 0$

15. $3x^2 + 7x - 6 = 0$

6. $4x^2 - 16x + 7 = 0$

16. $3x^2 + 4x - 15 = 0$

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

17. $3x^2 + 19x + 20 = 0$

8. $4x^2 + 37x + 40 = 0$

18. $5x^2 + 32x + 35 = 0$

9. $4x^2 + 25x - 56 = 0$

19. $2x^2 - 7x - 4 = 0$

10. $4x^2 + 27x - 7 = 0$

20. $5x^2 + 44x + 32 = 0$

Solving Quadratic Equations (D) Answers

Name: _____

Date: _____

Solve each equation for x.

- $2x^2 - 13x + 6 = 0$
 $(2x - 1)(x - 6) = 0$
 $x = \frac{1}{2}, 6$
- $3x^2 - 2x - 5 = 0$
 $(x + 1)(3x - 5) = 0$
 $x = -1, 1\frac{2}{3}$
- $4x^2 + 15x + 14 = 0$
 $(4x + 7)(x + 2) = 0$
 $x = -1\frac{3}{4}, -2$
- $2x^2 + 13x + 18 = 0$
 $(2x + 9)(x + 2) = 0$
 $x = -4\frac{1}{2}, -2$
- $4x^2 - 11x - 45 = 0$
 $(x - 5)(4x + 9) = 0$
 $x = 5, -2\frac{1}{4}$
- $4x^2 - 16x + 7 = 0$
 $(2x - 1)(2x - 7) = 0$
 $x = \frac{1}{2}, 3\frac{1}{2}$
- $x^2 + 3x - 10 = 0$
 $(x + 5)(x - 2) = 0$
 $x = -5, 2$
- $4x^2 + 37x + 40 = 0$
 $(4x + 5)(x + 8) = 0$
 $x = -1\frac{1}{4}, -8$
- $4x^2 + 25x - 56 = 0$
 $(x + 8)(4x - 7) = 0$
 $x = -8, 1\frac{3}{4}$
- $4x^2 + 27x - 7 = 0$
 $(x + 7)(4x - 1) = 0$
 $x = -7, \frac{1}{4}$
- $5x^2 - 2x - 16 = 0$
 $(5x + 8)(x - 2) = 0$
 $x = -1\frac{3}{5}, 2$
- $3x^2 - 11x - 4 = 0$
 $(3x + 1)(x - 4) = 0$
 $x = -\frac{1}{3}, 4$
- $4x^2 - 11x + 6 = 0$
 $(4x - 3)(x - 2) = 0$
 $x = \frac{3}{4}, 2$
- $4x^2 + 23x - 72 = 0$
 $(4x - 9)(x + 8) = 0$
 $x = 2\frac{1}{4}, -8$
- $3x^2 + 7x - 6 = 0$
 $(3x - 2)(x + 3) = 0$
 $x = \frac{2}{3}, -3$
- $3x^2 + 4x - 15 = 0$
 $(x + 3)(3x - 5) = 0$
 $x = -3, 1\frac{2}{3}$
- $3x^2 + 19x + 20 = 0$
 $(3x + 4)(x + 5) = 0$
 $x = -1\frac{1}{3}, -5$
- $5x^2 + 32x + 35 = 0$
 $(5x + 7)(x + 5) = 0$
 $x = -1\frac{2}{5}, -5$
- $2x^2 - 7x - 4 = 0$
 $(2x + 1)(x - 4) = 0$
 $x = -\frac{1}{2}, 4$
- $5x^2 + 44x + 32 = 0$
 $(5x + 4)(x + 8) = 0$
 $x = -\frac{4}{5}, -8$

Solving Quadratic Equations (E)

Name: _____

Date: _____

Solve each equation for x.

1. $3x^2 + 10x + 8 = 0$

11. $3x^2 + 2x - 16 = 0$

2. $4x^2 - 11x + 6 = 0$

12. $5x^2 + 9x - 18 = 0$

3. $5x^2 - 32x - 21 = 0$

13. $4x^2 - 21x - 49 = 0$

4. $2x^2 + 7x - 72 = 0$

14. $4x^2 - x - 14 = 0$

5. $2x^2 - 15x + 28 = 0$

15. $2x^2 + 13x - 24 = 0$

6. $4x^2 + 15x - 4 = 0$

16. $4x^2 + 13x + 10 = 0$

7. $x^2 - 36 = 0$

17. $4x^2 - 23x + 28 = 0$

8. $4x^2 + 37x + 9 = 0$

18. $2x^2 + 5x - 63 = 0$

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

19. $2x^2 - 5x - 63 = 0$

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

20. $x^2 - 3x - 40 = 0$

Solving Quadratic Equations (E) Answers

Name: _____

Date: _____

Solve each equation for x.

1. $3x^2 + 10x + 8 = 0$
 $(3x + 4)(x + 2) = 0$
 $x = -1\frac{1}{3}, -2$

2. $4x^2 - 11x + 6 = 0$
 $(4x - 3)(x - 2) = 0$
 $x = \frac{3}{4}, 2$

3. $5x^2 - 32x - 21 = 0$
 $(x - 7)(5x + 3) = 0$
 $x = 7, -\frac{3}{5}$

4. $2x^2 + 7x - 72 = 0$
 $(x + 8)(2x - 9) = 0$
 $x = -8, 4\frac{1}{2}$

5. $2x^2 - 15x + 28 = 0$
 $(2x - 7)(x - 4) = 0$
 $x = 3\frac{1}{2}, 4$

6. $4x^2 + 15x - 4 = 0$
 $(4x - 1)(x + 4) = 0$
 $x = \frac{1}{4}, -4$

7. $x^2 - 36 = 0$
 $(x + 6)(x - 6) = 0$
 $x = -6, 6$

8. $4x^2 + 37x + 9 = 0$
 $(4x + 1)(x + 9) = 0$
 $x = -\frac{1}{4}, -9$

9. $5x^2 - 9x - 2 = 0$
 $(x - 2)(5x + 1) = 0$
 $x = 2, -\frac{1}{5}$

10. $2x^2 + 13x + 6 = 0$
 $(2x + 1)(x + 6) = 0$
 $x = -\frac{1}{2}, -6$

11. $3x^2 + 2x - 16 = 0$
 $(x - 2)(3x + 8) = 0$
 $x = 2, -2\frac{2}{3}$

12. $5x^2 + 9x - 18 = 0$
 $(x + 3)(5x - 6) = 0$
 $x = -3, 1\frac{1}{5}$

13. $4x^2 - 21x - 49 = 0$
 $(x - 7)(4x + 7) = 0$
 $x = 7, -1\frac{3}{4}$

14. $4x^2 - x - 14 = 0$
 $(x - 2)(4x + 7) = 0$
 $x = 2, -1\frac{3}{4}$

15. $2x^2 + 13x - 24 = 0$
 $(2x - 3)(x + 8) = 0$
 $x = 1\frac{1}{2}, -8$

16. $4x^2 + 13x + 10 = 0$
 $(x + 2)(4x + 5) = 0$
 $x = -2, -1\frac{1}{4}$

17. $4x^2 - 23x + 28 = 0$
 $(x - 4)(4x - 7) = 0$
 $x = 4, 1\frac{3}{4}$

18. $2x^2 + 5x - 63 = 0$
 $(2x - 9)(x + 7) = 0$
 $x = 4\frac{1}{2}, -7$

19. $2x^2 - 5x - 63 = 0$
 $(x - 7)(2x + 9) = 0$
 $x = 7, -4\frac{1}{2}$

20. $x^2 - 3x - 40 = 0$
 $(x - 8)(x + 5) = 0$
 $x = 8, -5$

Solving Quadratic Equations (F)

Name: _____

Date: _____

Solve each equation for x.

1. $3x^2 + 34x + 63 = 0$

11. $5x^2 + x - 18 = 0$

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

12. $4x^2 - 24x + 27 = 0$

3. $3x^2 - 8x + 4 = 0$

13. $5x^2 + 44x + 32 = 0$

4. $2x^2 + 5x - 42 = 0$

14. $4x^2 - 27x + 18 = 0$

5. $4x^2 + 16x + 15 = 0$

15. $3x^2 + 17x + 24 = 0$

6. $2x^2 + 13x - 24 = 0$

16. $x^2 + 4x + 3 = 0$

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

17. $4x^2 + 36x + 81 = 0$

8. $2x^2 - 7x + 5 = 0$

18. $3x^2 + 11x - 42 = 0$

9. $5x^2 - 6x - 27 = 0$

19. $2x^2 + 21x + 49 = 0$

10. $3x^2 + 19x + 20 = 0$

20. $x^2 + 13x + 36 = 0$

Solving Quadratic Equations (F) Answers

Name: _____

Date: _____

Solve each equation for x.

- $3x^2 + 34x + 63 = 0$
 $(3x + 7)(x + 9) = 0$
 $x = -2\frac{1}{3}, -9$
- $3x^2 - 20x - 63 = 0$
 $(3x + 7)(x - 9) = 0$
 $x = -2\frac{1}{3}, 9$
- $3x^2 - 8x + 4 = 0$
 $(3x - 2)(x - 2) = 0$
 $x = \frac{2}{3}, 2$
- $2x^2 + 5x - 42 = 0$
 $(x + 6)(2x - 7) = 0$
 $x = -6, 3\frac{1}{2}$
- $4x^2 + 16x + 15 = 0$
 $(2x + 3)(2x + 5) = 0$
 $x = -1\frac{1}{2}, -2\frac{1}{2}$
- $2x^2 + 13x - 24 = 0$
 $(x + 8)(2x - 3) = 0$
 $x = -8, 1\frac{1}{2}$
- $2x^2 + 7x - 30 = 0$
 $(x + 6)(2x - 5) = 0$
 $x = -6, 2\frac{1}{2}$
- $2x^2 - 7x + 5 = 0$
 $(2x - 5)(x - 1) = 0$
 $x = 2\frac{1}{2}, 1$
- $5x^2 - 6x - 27 = 0$
 $(x - 3)(5x + 9) = 0$
 $x = 3, -1\frac{4}{5}$
- $3x^2 + 19x + 20 = 0$
 $(x + 5)(3x + 4) = 0$
 $x = -5, -1\frac{1}{3}$
- $5x^2 + x - 18 = 0$
 $(x + 2)(5x - 9) = 0$
 $x = -2, 1\frac{4}{5}$
- $4x^2 - 24x + 27 = 0$
 $(2x - 3)(2x - 9) = 0$
 $x = 1\frac{1}{2}, 4\frac{1}{2}$
- $5x^2 + 44x + 32 = 0$
 $(x + 8)(5x + 4) = 0$
 $x = -8, -\frac{4}{5}$
- $4x^2 - 27x + 18 = 0$
 $(4x - 3)(x - 6) = 0$
 $x = \frac{3}{4}, 6$
- $3x^2 + 17x + 24 = 0$
 $(x + 3)(3x + 8) = 0$
 $x = -3, -2\frac{2}{3}$
- $x^2 + 4x + 3 = 0$
 $(x + 1)(x + 3) = 0$
 $x = -1, -3$
- $4x^2 + 36x + 81 = 0$
 $(2x + 9)(2x + 9) = (2x + 9)^2 = 0$
 $x = -4\frac{1}{2}$
- $3x^2 + 11x - 42 = 0$
 $(x + 6)(3x - 7) = 0$
 $x = -6, 2\frac{1}{3}$
- $2x^2 + 21x + 49 = 0$
 $(x + 7)(2x + 7) = 0$
 $x = -7, -3\frac{1}{2}$
- $x^2 + 13x + 36 = 0$
 $(x + 9)(x + 4) = 0$
 $x = -9, -4$

Solving Quadratic Equations (G)

Name: _____

Date: _____

Solve each equation for x.

1. $4x^2 - 7x + 3 = 0$

11. $4x^2 - 17x + 4 = 0$

2. $4x^2 - 16x - 9 = 0$

12. $3x^2 + 35x + 72 = 0$

3. $3x^2 + 8x - 16 = 0$

13. $2x^2 - 21x + 54 = 0$

4. $3x^2 + 19x - 14 = 0$

14. $4x^2 - 5x + 1 = 0$

5. $5x^2 + 39x - 54 = 0$

15. $5x^2 + 42x - 27 = 0$

6. $5x^2 - 18x + 16 = 0$

16. $4x^2 - 37x + 63 = 0$

7. $3x^2 - 4x + 1 = 0$

17. $3x^2 - 22x + 7 = 0$

8. $x^2 + 12x + 35 = 0$

18. $x^2 + 5x + 4 = 0$

9. $5x^2 - 43x + 56 = 0$

19. $x^2 + 4x - 5 = 0$

10. $x^2 + 2x - 24 = 0$

20. $x^2 - 49 = 0$

Solving Quadratic Equations (G) Answers

Name: _____

Date: _____

Solve each equation for x.

1. $4x^2 - 7x + 3 = 0$
 $(x - 1)(4x - 3) = 0$
 $x = 1, \frac{3}{4}$

2. $4x^2 - 16x - 9 = 0$
 $(2x - 9)(2x + 1) = 0$
 $x = 4\frac{1}{2}, -\frac{1}{2}$

3. $3x^2 + 8x - 16 = 0$
 $(x + 4)(3x - 4) = 0$
 $x = -4, 1\frac{1}{3}$

4. $3x^2 + 19x - 14 = 0$
 $(x + 7)(3x - 2) = 0$
 $x = -7, \frac{2}{3}$

5. $5x^2 + 39x - 54 = 0$
 $(x + 9)(5x - 6) = 0$
 $x = -9, 1\frac{1}{5}$

6. $5x^2 - 18x + 16 = 0$
 $(x - 2)(5x - 8) = 0$
 $x = 2, 1\frac{3}{5}$

7. $3x^2 - 4x + 1 = 0$
 $(3x - 1)(x - 1) = 0$
 $x = \frac{1}{3}, 1$

8. $x^2 + 12x + 35 = 0$
 $(x + 7)(x + 5) = 0$
 $x = -7, -5$

9. $5x^2 - 43x + 56 = 0$
 $(5x - 8)(x - 7) = 0$
 $x = 1\frac{3}{5}, 7$

10. $x^2 + 2x - 24 = 0$
 $(x + 6)(x - 4) = 0$
 $x = -6, 4$

11. $4x^2 - 17x + 4 = 0$
 $(x - 4)(4x - 1) = 0$
 $x = 4, \frac{1}{4}$

12. $3x^2 + 35x + 72 = 0$
 $(3x + 8)(x + 9) = 0$
 $x = -2\frac{2}{3}, -9$

13. $2x^2 - 21x + 54 = 0$
 $(x - 6)(2x - 9) = 0$
 $x = 6, 4\frac{1}{2}$

14. $4x^2 - 5x + 1 = 0$
 $(x - 1)(4x - 1) = 0$
 $x = 1, \frac{1}{4}$

15. $5x^2 + 42x - 27 = 0$
 $(x + 9)(5x - 3) = 0$
 $x = -9, \frac{3}{5}$

16. $4x^2 - 37x + 63 = 0$
 $(x - 7)(4x - 9) = 0$
 $x = 7, 2\frac{1}{4}$

17. $3x^2 - 22x + 7 = 0$
 $(x - 7)(3x - 1) = 0$
 $x = 7, \frac{1}{3}$

18. $x^2 + 5x + 4 = 0$
 $(x + 4)(x + 1) = 0$
 $x = -4, -1$

19. $x^2 + 4x - 5 = 0$
 $(x - 1)(x + 5) = 0$
 $x = 1, -5$

20. $x^2 - 49 = 0$
 $(x - 7)(x + 7) = 0$
 $x = 7, -7$

Solving Quadratic Equations (H)

Name: _____

Date: _____

Solve each equation for x.

1. $x^2 - 10x + 9 = 0$

11. $4x^2 + 8x - 45 = 0$

2. $5x^2 - 27x - 18 = 0$

12. $4x^2 + 35x + 24 = 0$

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

13. $3x^2 + 23x - 36 = 0$

4. $4x^2 + 5x - 6 = 0$

14. $4x^2 + 19x - 30 = 0$

5. $x^2 + 13x + 40 = 0$

15. $3x^2 - 34x + 63 = 0$

6. $4x^2 - 35x + 49 = 0$

16. $5x^2 - 32x + 35 = 0$

7. $5x^2 + 31x - 72 = 0$

17. $5x^2 - 31x + 30 = 0$

8. $3x^2 + 32x + 64 = 0$

18. $4x^2 - 27x + 18 = 0$

9. $4x^2 + 32x + 63 = 0$

19. $2x^2 + 11x + 5 = 0$

10. $2x^2 - 7x + 5 = 0$

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

Solving Quadratic Equations (H) Answers

Name: _____

Date: _____

Solve each equation for x.

- $x^2 - 10x + 9 = 0$
 $(x - 9)(x - 1) = 0$
 $x = 9, 1$
- $5x^2 - 27x - 18 = 0$
 $(5x + 3)(x - 6) = 0$
 $x = -\frac{3}{5}, 6$
- $x^2 + 4x - 21 = 0$
 $(x + 7)(x - 3) = 0$
 $x = -7, 3$
- $4x^2 + 5x - 6 = 0$
 $(x + 2)(4x - 3) = 0$
 $x = -2, \frac{3}{4}$
- $x^2 + 13x + 40 = 0$
 $(x + 8)(x + 5) = 0$
 $x = -8, -5$
- $4x^2 - 35x + 49 = 0$
 $(4x - 7)(x - 7) = 0$
 $x = 1\frac{3}{4}, 7$
- $5x^2 + 31x - 72 = 0$
 $(x + 8)(5x - 9) = 0$
 $x = -8, 1\frac{4}{5}$
- $3x^2 + 32x + 64 = 0$
 $(3x + 8)(x + 8) = 0$
 $x = -2\frac{2}{3}, -8$
- $4x^2 + 32x + 63 = 0$
 $(2x + 7)(2x + 9) = 0$
 $x = -3\frac{1}{2}, -4\frac{1}{2}$
- $2x^2 - 7x + 5 = 0$
 $(x - 1)(2x - 5) = 0$
 $x = 1, 2\frac{1}{2}$
- $4x^2 + 8x - 45 = 0$
 $(2x + 9)(2x - 5) = 0$
 $x = -4\frac{1}{2}, 2\frac{1}{2}$
- $4x^2 + 35x + 24 = 0$
 $(4x + 3)(x + 8) = 0$
 $x = -\frac{3}{4}, -8$
- $3x^2 + 23x - 36 = 0$
 $(3x - 4)(x + 9) = 0$
 $x = 1\frac{1}{3}, -9$
- $4x^2 + 19x - 30 = 0$
 $(x + 6)(4x - 5) = 0$
 $x = -6, 1\frac{1}{4}$
- $3x^2 - 34x + 63 = 0$
 $(x - 9)(3x - 7) = 0$
 $x = 9, 2\frac{1}{3}$
- $5x^2 - 32x + 35 = 0$
 $(x - 5)(5x - 7) = 0$
 $x = 5, 1\frac{2}{5}$
- $5x^2 - 31x + 30 = 0$
 $(x - 5)(5x - 6) = 0$
 $x = 5, 1\frac{1}{5}$
- $4x^2 - 27x + 18 = 0$
 $(4x - 3)(x - 6) = 0$
 $x = \frac{3}{4}, 6$
- $2x^2 + 11x + 5 = 0$
 $(2x + 1)(x + 5) = 0$
 $x = -\frac{1}{2}, -5$
- $x^2 - 9x + 14 = 0$
 $(x - 2)(x - 7) = 0$
 $x = 2, 7$

Solving Quadratic Equations (I)

Name: _____

Date: _____

Solve each equation for x.

1. $4x^2 - 29x + 45 = 0$

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

2. $5x^2 + 38x + 21 = 0$

12. $5x^2 + 54x + 81 = 0$

3. $5x^2 - 23x - 10 = 0$

13. $2x^2 + 9x - 81 = 0$

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

14. $x^2 - 7x + 10 = 0$

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

15. $2x^2 - 5x - 12 = 0$

6. $2x^2 - 21x + 54 = 0$

16. $2x^2 - 9x - 35 = 0$

7. $3x^2 + 29x + 18 = 0$

17. $4x^2 + 35x + 49 = 0$

8. $3x^2 + 17x + 20 = 0$

18. $4x^2 + 23x - 6 = 0$

9. $4x^2 + 8x - 5 = 0$

19. $x^2 + 6x - 7 = 0$

10. $4x^2 - 16x - 9 = 0$

20. $4x^2 + 4x - 63 = 0$

Solving Quadratic Equations (I) Answers

Name: _____

Date: _____

Solve each equation for x.

1. $4x^2 - 29x + 45 = 0$
 $(4x - 9)(x - 5) = 0$
 $x = 2\frac{1}{4}, 5$

2. $5x^2 + 38x + 21 = 0$
 $(5x + 3)(x + 7) = 0$
 $x = -\frac{3}{5}, -7$

3. $5x^2 - 23x - 10 = 0$
 $(5x + 2)(x - 5) = 0$
 $x = -\frac{2}{5}, 5$

4. $4x^2 + 20x + 25 = 0$
 $(2x + 5)(2x + 5) = (2x + 5)^2 = 0$
 $x = -2\frac{1}{2}$

5. $5x^2 + 11x + 2 = 0$
 $(x + 2)(5x + 1) = 0$
 $x = -2, -\frac{1}{5}$

6. $2x^2 - 21x + 54 = 0$
 $(2x - 9)(x - 6) = 0$
 $x = 4\frac{1}{2}, 6$

7. $3x^2 + 29x + 18 = 0$
 $(x + 9)(3x + 2) = 0$
 $x = -9, -\frac{2}{3}$

8. $3x^2 + 17x + 20 = 0$
 $(x + 4)(3x + 5) = 0$
 $x = -4, -1\frac{2}{3}$

9. $4x^2 + 8x - 5 = 0$
 $(2x - 1)(2x + 5) = 0$
 $x = \frac{1}{2}, -2\frac{1}{2}$

10. $4x^2 - 16x - 9 = 0$
 $(2x - 9)(2x + 1) = 0$
 $x = 4\frac{1}{2}, -\frac{1}{2}$

11. $3x^2 + 4x - 7 = 0$
 $(3x + 7)(x - 1) = 0$
 $x = -2\frac{1}{3}, 1$

12. $5x^2 + 54x + 81 = 0$
 $(5x + 9)(x + 9) = 0$
 $x = -1\frac{4}{5}, -9$

13. $2x^2 + 9x - 81 = 0$
 $(x + 9)(2x - 9) = 0$
 $x = -9, 4\frac{1}{2}$

14. $x^2 - 7x + 10 = 0$
 $(x - 2)(x - 5) = 0$
 $x = 2, 5$

15. $2x^2 - 5x - 12 = 0$
 $(x - 4)(2x + 3) = 0$
 $x = 4, -1\frac{1}{2}$

16. $2x^2 - 9x - 35 = 0$
 $(2x + 5)(x - 7) = 0$
 $x = -2\frac{1}{2}, 7$

17. $4x^2 + 35x + 49 = 0$
 $(4x + 7)(x + 7) = 0$
 $x = -1\frac{3}{4}, -7$

18. $4x^2 + 23x - 6 = 0$
 $(x + 6)(4x - 1) = 0$
 $x = -6, \frac{1}{4}$

19. $x^2 + 6x - 7 = 0$
 $(x + 7)(x - 1) = 0$
 $x = -7, 1$

20. $4x^2 + 4x - 63 = 0$
 $(2x - 7)(2x + 9) = 0$
 $x = 3\frac{1}{2}, -4\frac{1}{2}$

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.

- $5x^2 + 7x + 2 = 0$
 $(x + 1)(5x + 2) = 0$
 $x = -1, -\frac{2}{5}$
- $4x^2 - 12x - 7 = 0$
 $(2x + 1)(2x - 7) = 0$
 $x = -\frac{1}{2}, 3\frac{1}{2}$
- $2x^2 + 19x + 35 = 0$
 $(x + 7)(2x + 5) = 0$
 $x = -7, -2\frac{1}{2}$
- $4x^2 + 20x + 25 = 0$
 $(2x + 5)(2x + 5) = (2x + 5)^2 = 0$
 $x = -2\frac{1}{2}$
- $5x^2 + 33x - 56 = 0$
 $(5x - 7)(x + 8) = 0$
 $x = 1\frac{2}{5}, -8$
- $3x^2 + 13x - 10 = 0$
 $(x + 5)(3x - 2) = 0$
 $x = -5, \frac{2}{3}$
- $x^2 + 12x + 27 = 0$
 $(x + 3)(x + 9) = 0$
 $x = -3, -9$
- $3x^2 + 29x + 40 = 0$
 $(x + 8)(3x + 5) = 0$
 $x = -8, -1\frac{2}{3}$
- $5x^2 - 26x + 5 = 0$
 $(x - 5)(5x - 1) = 0$
 $x = 5, \frac{1}{5}$
- $4x^2 + 33x - 27 = 0$
 $(4x - 3)(x + 9) = 0$
 $x = \frac{3}{4}, -9$
- $3x^2 - 4x - 7 = 0$
 $(x + 1)(3x - 7) = 0$
 $x = -1, 2\frac{1}{3}$
- $5x^2 + 12x - 32 = 0$
 $(5x - 8)(x + 4) = 0$
 $x = 1\frac{3}{5}, -4$
- $2x^2 + 11x + 15 = 0$
 $(x + 3)(2x + 5) = 0$
 $x = -3, -2\frac{1}{2}$
- $2x^2 - 15x + 18 = 0$
 $(2x - 3)(x - 6) = 0$
 $x = 1\frac{1}{2}, 6$
- $5x^2 + 23x - 10 = 0$
 $(5x - 2)(x + 5) = 0$
 $x = \frac{2}{5}, -5$
- $2x^2 + 5x - 12 = 0$
 $(2x - 3)(x + 4) = 0$
 $x = 1\frac{1}{2}, -4$
- $x^2 + 5x - 24 = 0$
 $(x - 3)(x + 8) = 0$
 $x = 3, -8$
- $4x^2 + 45x + 81 = 0$
 $(x + 9)(4x + 9) = 0$
 $x = -9, -2\frac{1}{4}$
- $4x^2 + 24x + 27 = 0$
 $(2x + 9)(2x + 3) = 0$
 $x = -4\frac{1}{2}, -1\frac{1}{2}$
- $4x^2 - 39x + 56 = 0$
 $(4x - 7)(x - 8) = 0$
 $x = 1\frac{3}{4}, 8$