Solving Quadratic Equations (A)

Name: _____

Date: _____

Solve each equation for x.

1. $-2x^2 - 19x - 45 = 0$

2. $-7x^2 + 55x + 72 = 0$

3. $8x^2 - 59x - 40 = 0$

4. $8x^2 + 35x - 25 = 0$

5. $-8x^2 + 9x + 14 = 0$

6. $3x^2 - 4x - 32 = 0$

7. $8x^2 + 41x - 42 = 0$

8. $8x^2 - 6x + 1 = 0$

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

10. $-3x^2 + 32x - 64 = 0$

11. $-7x^2 + 33x - 20 = 0$

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

13. $-7x^2 - 11x - 4 = 0$

14. $8x^2 - 33x + 4 = 0$

15. $2x^2 + x - 36 = 0$

16. $-8x^2 + 25x - 3 = 0$

17. $-5x^2 - 16x + 16 = 0$

18. $-5x^2 - 36x + 32 = 0$

19. $9x^2 - 4x - 5 = 0$

20. $5x^2 - 22x - 48 = 0$

Solving Quadratic Equations (A) Answers

Name: _____

Date: _____

Solve each equation for x.

1. $-2x^2 - 19x - 45 = 0$
   $-(x + 5)(2x + 9) = 0$
   $x = -5, -4\frac{1}{2}$

2. $-7x^2 + 55x + 72 = 0$
   $-(7x + 8)(x - 9) = 0$
   $x = -1\frac{1}{7}, 9$

3. $8x^2 - 59x - 40 = 0$
   $(x - 8)(8x + 5) = 0$
   $x = 8, -\frac{5}{8}$

4. $8x^2 + 35x - 25 = 0$
   $(8x - 5)(x + 5) = 0$
   $x = \frac{5}{8}, -5$

5. $-8x^2 + 9x + 14 = 0$
   $-(8x + 7)(x - 2) = 0$
   $x = -\frac{7}{8}, 2$

6. $3x^2 - 4x - 32 = 0$
   $(3x + 8)(x - 4) = 0$
   $x = -2\frac{2}{3}, 4$

7. $8x^2 + 41x - 42 = 0$
   $(8x - 7)(x + 6) = 0$
   $x = \frac{7}{8}, -6$

8. $8x^2 - 6x + 1 = 0$
   $(4x - 1)(2x - 1) = 0$
   $x = \frac{1}{4}, \frac{1}{2}$

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

10. $-3x^2 + 32x - 64 = 0$
    $-(3x - 8)(x - 8) = 0$
    $x = 2\frac{2}{3}, 8$

11. $-7x^2 + 33x - 20 = 0$
    $-(x - 4)(7x - 5) = 0$
    $x = 4, \frac{5}{7}$

12. $6x^2 + x - 12 = 0$
    $(3x - 4)(2x + 3) = 0$
    $x = 1\frac{1}{3}, -1\frac{1}{2}$

13. $-7x^2 - 11x - 4 = 0$
    $-(x + 1)(7x + 4) = 0$
    $x = -1, -\frac{4}{7}$

14. $8x^2 - 33x + 4 = 0$
    $(8x - 1)(x - 4) = 0$
    $x = \frac{1}{8}, 4$

15. $2x^2 + x - 36 = 0$
    $(x - 4)(2x + 9) = 0$
    $x = 4, -4\frac{1}{2}$

16. $-8x^2 + 25x - 3 = 0$
    $-(x - 3)(8x - 1) = 0$
    $x = 3, \frac{1}{8}$

17. $-5x^2 - 16x + 16 = 0$
    $-(5x - 4)(x + 4) = 0$
    $x = \frac{4}{5}, -4$

18. $-5x^2 - 36x + 32 = 0$
    $-(5x - 4)(x + 8) = 0$
    $x = \frac{4}{5}, -8$

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

20. $5x^2 - 22x - 48 = 0$
    $(x - 6)(5x + 8) = 0$
    $x = 6, -1\frac{3}{5}$

Solving Quadratic Equations (B)

Name: _____

Date: _____

Solve each equation for x.

1. $-3x^2 + 26x - 48 = 0$

2. $8x^2 + 18x - 35 = 0$

3. $9x^2 + 77x - 36 = 0$

4. $-8x^2 + 71x + 9 = 0$

5. $6x^2 - 37x + 56 = 0$

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

7. $8x^2 + 2x - 15 = 0$

8. $3x^2 - 20x - 32 = 0$

9. $-9x^2 + 30x - 25 = 0$

10. $5x^2 - 6x - 27 = 0$

11. $-4x^2 - 27x - 18 = 0$

12. $-6x^2 - 31x - 40 = 0$

13. $7x^2 + 45x - 28 = 0$

14. $-7x^2 + 55x - 42 = 0$

15. $-9x^2 + 59x + 28 = 0$

16. $7x^2 - 52x - 32 = 0$

17. $7x^2 - 69x + 54 = 0$

18. $-8x^2 - 7x + 1 = 0$

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

20. $6x^2 + 35x + 25 = 0$

Solving Quadratic Equations (B) Answers

Name: _____

Date: _____

Solve each equation for x.

1. $-3x^2 + 26x - 48 = 0$
$-(x-6)(3x-8) = 0$
$x = 6, 2\frac{2}{3}$

2. $8x^2 + 18x - 35 = 0$
$(4x-5)(2x+7) = 0$
$x = 1\frac{1}{4}, -3\frac{1}{2}$

3. $9x^2 + 77x - 36 = 0$
$(9x-4)(x+9) = 0$
$x = \frac{4}{9}, -9$

4. $-8x^2 + 71x + 9 = 0$
$-(x-9)(8x+1) = 0$
$x = 9, -\frac{1}{8}$

5. $6x^2 - 37x + 56 = 0$
$(2x-7)(3x-8) = 0$
$x = 3\frac{1}{2}, 2\frac{2}{3}$

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

7. $8x^2 + 2x - 15 = 0$
$(4x-5)(2x+3) = 0$
$x = 1\frac{1}{4}, -1\frac{1}{2}$

8. $3x^2 - 20x - 32 = 0$
$(x-8)(3x+4) = 0$
$x = 8, -1\frac{1}{3}$

9. $-9x^2 + 30x - 25 = 0$
$-(3x-5)(3x-5) = -(3x-5)^2 = 0$
$x = 1\frac{2}{3}$

10. $5x^2 - 6x - 27 = 0$
$(5x+9)(x-3) = 0$
$x = -1\frac{4}{5}, 3$

11. $-4x^2 - 27x - 18 = 0$
$-(x+6)(4x+3) = 0$
$x = -6, -\frac{3}{4}$

12. $-6x^2 - 31x - 40 = 0$
$-(2x+5)(3x+8) = 0$
$x = -2\frac{1}{2}, -2\frac{2}{3}$

13. $7x^2 + 45x - 28 = 0$
$(x+7)(7x-4) = 0$
$x = -7, \frac{4}{7}$

14. $-7x^2 + 55x - 42 = 0$
$-(x-7)(7x-6) = 0$
$x = 7, \frac{6}{7}$

15. $-9x^2 + 59x + 28 = 0$
$-(x-7)(9x+4) = 0$
$x = 7, -\frac{4}{9}$

16. $7x^2 - 52x - 32 = 0$
$(7x+4)(x-8) = 0$
$x = -\frac{4}{7}, 8$

17. $7x^2 - 69x + 54 = 0$
$(7x-6)(x-9) = 0$
$x = \frac{6}{7}, 9$

18. $-8x^2 - 7x + 1 = 0$
$-(x+1)(8x-1) = 0$
$x = -1, \frac{1}{8}$

19. $-3x^2 - 19x + 40 = 0$
$-(x+8)(3x-5) = 0$
$x = -8, 1\frac{2}{3}$

20. $6x^2 + 35x + 25 = 0$
$(x+5)(6x+5) = 0$
$x = -5, -\frac{5}{6}$

Solving Quadratic Equations (C)

Name: _____   Date: _____

Solve each equation for x.

1. $8x^2 + 53x + 30 = 0$

2. $8x^2 + 17x + 9 = 0$

3. $-8x^2 + 14x + 15 = 0$

4. $-x^2 + 14x - 45 = 0$

5. $-6x^2 - 37x - 6 = 0$

6. $8x^2 - 25x + 18 = 0$

7. $-7x^2 + 19x + 36 = 0$

8. $9x^2 - 14x + 5 = 0$

9. $-9x^2 - 59x - 30 = 0$

10. $6x^2 + 61x + 63 = 0$

11. $8x^2 - 21x - 9 = 0$

12. $-5x^2 - 52x - 63 = 0$

13. $2x^2 + 25x + 63 = 0$

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

15. $6x^2 + 35x + 49 = 0$

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

17. $-9x^2 - 47x + 42 = 0$

18. $9x^2 + 58x + 24 = 0$

19. $-8x^2 - 10x + 63 = 0$

20. $2x^2 - 9x + 7 = 0$

Solving Quadratic Equations (C) Answers

Name: _____

Date: _____

Solve each equation for x.

1. $8x^2 + 53x + 30 = 0$
   $(x + 6)(8x + 5) = 0$
   $x = -6, -\frac{5}{8}$

2. $8x^2 + 17x + 9 = 0$
   $(8x + 9)(x + 1) = 0$
   $x = -1\frac{1}{8}, -1$

3. $-8x^2 + 14x + 15 = 0$
   $-(2x - 5)(4x + 3) = 0$
   $x = 2\frac{1}{2}, -\frac{3}{4}$

4. $-x^2 + 14x - 45 = 0$
   $-(x - 9)(x - 5) = 0$
   $x = 9, 5$

5. $-6x^2 - 37x - 6 = 0$
   $-(x + 6)(6x + 1) = 0$
   $x = -6, -\frac{1}{6}$

6. $8x^2 - 25x + 18 = 0$
   $(x - 2)(8x - 9) = 0$
   $x = 2, 1\frac{1}{8}$

7. $-7x^2 + 19x + 36 = 0$
   $-(7x + 9)(x - 4) = 0$
   $x = -1\frac{2}{7}, 4$

8. $9x^2 - 14x + 5 = 0$
   $(x - 1)(9x - 5) = 0$
   $x = 1, \frac{5}{9}$

9. $-9x^2 - 59x - 30 = 0$
   $-(x + 6)(9x + 5) = 0$
   $x = -6, -\frac{5}{9}$

10. $6x^2 + 61x + 63 = 0$
    $(x + 9)(6x + 7) = 0$
    $x = -9, -1\frac{1}{6}$

11. $8x^2 - 21x - 9 = 0$
    $(x - 3)(8x + 3) = 0$
    $x = 3, -\frac{3}{8}$

12. $-5x^2 - 52x - 63 = 0$
    $-(5x + 7)(x + 9) = 0$
    $x = -1\frac{2}{5}, -9$

13. $2x^2 + 25x + 63 = 0$
    $(2x + 7)(x + 9) = 0$
    $x = -3\frac{1}{2}, -9$

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

15. $6x^2 + 35x + 49 = 0$
    $(3x + 7)(2x + 7) = 0$
    $x = -2\frac{1}{3}, -3\frac{1}{2}$

16. $x^2 - 10x + 9 = 0$
    $(x - 1)(x - 9) = 0$
    $x = 1, 9$

17. $-9x^2 - 47x + 42 = 0$
    $-(9x - 7)(x + 6) = 0$
    $x = \frac{7}{9}, -6$

18. $9x^2 + 58x + 24 = 0$
    $(x + 6)(9x + 4) = 0$
    $x = -6, -\frac{4}{9}$

19. $-8x^2 - 10x + 63 = 0$
    $-(4x - 9)(2x + 7) = 0$
    $x = 2\frac{1}{4}, -3\frac{1}{2}$

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

Solving Quadratic Equations (D)

Name: _____

Solve each equation for x.

1. $-5x^2 + x + 18 = 0$

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

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

4. $5x^2 + 43x - 18 = 0$

5. $6x^2 + 7x - 24 = 0$

6. $5x^2 - 3x - 2 = 0$

7. $-2x^2 - 5x + 3 = 0$

8. $-7x^2 - 57x - 56 = 0$

9. $4x^2 - 21x + 5 = 0$

10. $3x^2 - 11x + 8 = 0$

11. $-6x^2 + 31x - 18 = 0$

12. $-3x^2 + 10x - 8 = 0$

13. $-3x^2 - 34x - 63 = 0$

14. $8x^2 - 65x + 8 = 0$

15. $8x^2 - 57x - 56 = 0$

16. $5x^2 - 27x + 10 = 0$

17. $4x^2 + 37x + 9 = 0$

18. $-6x^2 - 25x + 25 = 0$

19. $8x^2 + 2x - 15 = 0$

20. $7x^2 + 39x - 18 = 0$

Solving Quadratic Equations (D) Answers

Name: _____

Date: _____

Solve each equation for x.

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

2. $x^2 - 5x - 24 = 0$
   $(x - 8)(x + 3) = 0$
   $x = 8, -3$

3. $-x^2 - 4x + 21 = 0$
   $-(x + 7)(x - 3) = 0$
   $x = -7, 3$

4. $5x^2 + 43x - 18 = 0$
   $(5x - 2)(x + 9) = 0$
   $x = \frac{2}{5}, -9$

5. $6x^2 + 7x - 24 = 0$
   $(3x + 8)(2x - 3) = 0$
   $x = -2\frac{2}{3}, 1\frac{1}{2}$

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

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

8. $-7x^2 - 57x - 56 = 0$
   $-(x + 7)(7x + 8) = 0$
   $x = -7, -1\frac{1}{7}$

9. $4x^2 - 21x + 5 = 0$
   $(4x - 1)(x - 5) = 0$
   $x = \frac{1}{4}, 5$

10. $3x^2 - 11x + 8 = 0$
    $(3x - 8)(x - 1) = 0$
    $x = 2\frac{2}{3}, 1$

11. $-6x^2 + 31x - 18 = 0$
    $-(2x - 9)(3x - 2) = 0$
    $x = 4\frac{1}{2}, \frac{2}{3}$

12. $-3x^2 + 10x - 8 = 0$
    $-(3x - 4)(x - 2) = 0$
    $x = 1\frac{1}{3}, 2$

13. $-3x^2 - 34x - 63 = 0$
    $-(x + 9)(3x + 7) = 0$
    $x = -9, -2\frac{1}{3}$

14. $8x^2 - 65x + 8 = 0$
    $(x - 8)(8x - 1) = 0$
    $x = 8, \frac{1}{8}$

15. $8x^2 - 57x - 56 = 0$
    $(x - 8)(8x + 7) = 0$
    $x = 8, -\frac{7}{8}$

16. $5x^2 - 27x + 10 = 0$
    $(5x - 2)(x - 5) = 0$
    $x = \frac{2}{5}, 5$

17. $4x^2 + 37x + 9 = 0$
    $(4x + 1)(x + 9) = 0$
    $x = -\frac{1}{4}, -9$

18. $-6x^2 - 25x + 25 = 0$
    $-(6x - 5)(x + 5) = 0$
    $x = \frac{5}{6}, -5$

19. $8x^2 + 2x - 15 = 0$
    $(4x - 5)(2x + 3) = 0$
    $x = 1\frac{1}{4}, -1\frac{1}{2}$

20. $7x^2 + 39x - 18 = 0$
    $(7x - 3)(x + 6) = 0$
    $x = \frac{3}{7}, -6$

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Solving Quadratic Equations (E)

Name:_____ Date:_____

Solve each equation for x.

1. $-6x^2 - 59x - 45 = 0$

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

3. $6x^2 - 55x + 56 = 0$

4. $4x^2 + 28x + 45 = 0$

5. $6x^2 + 7x + 2 = 0$

6. $7x^2 + 40x + 25 = 0$

7. $6x^2 + 59x + 45 = 0$

8. $7x^2 + 18x - 9 = 0$

9. $2x^2 + 3x - 27 = 0$

10. $9x^2 - 14x - 8 = 0$

11. $-6x^2 - 7x + 24 = 0$

12. $8x^2 + 18x + 7 = 0$

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

14. $-9x^2 - 32x + 16 = 0$

15. $-8x^2 + 18x - 7 = 0$

16. $-7x^2 - 32x + 15 = 0$

17. $8x^2 + 45x - 18 = 0$

18. $4x^2 + 16x + 7 = 0$

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

20. $7x^2 + 10x - 8 = 0$

Solving Quadratic Equations (E) Answers

Name: _____

Date: _____

Solve each equation for x.

1. $-6x^2 - 59x - 45 = 0$
   $-(x + 9)(6x + 5) = 0$
   $x = -9, -\frac{5}{6}$

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

3. $6x^2 - 55x + 56 = 0$
   $(6x - 7)(x - 8) = 0$
   $x = 1\frac{1}{6}, 8$

4. $4x^2 + 28x + 45 = 0$
   $(2x + 9)(2x + 5) = 0$
   $x = -4\frac{1}{2}, -2\frac{1}{2}$

5. $6x^2 + 7x + 2 = 0$
   $(2x + 1)(3x + 2) = 0$
   $x = -\frac{1}{2}, -\frac{2}{3}$

6. $7x^2 + 40x + 25 = 0$
   $(x + 5)(7x + 5) = 0$
   $x = -5, -\frac{5}{7}$

7. $6x^2 + 59x + 45 = 0$
   $(x + 9)(6x + 5) = 0$
   $x = -9, -\frac{5}{6}$

8. $7x^2 + 18x - 9 = 0$
   $(x + 3)(7x - 3) = 0$
   $x = -3, \frac{3}{7}$

9. $2x^2 + 3x - 27 = 0$
   $(2x + 9)(x - 3) = 0$
   $x = -4\frac{1}{2}, 3$

10. $9x^2 - 14x - 8 = 0$
    $(x - 2)(9x + 4) = 0$
    $x = 2, -\frac{4}{9}$

11. $-6x^2 - 7x + 24 = 0$
    $-(3x + 8)(2x - 3) = 0$
    $x = -2\frac{2}{3}, 1\frac{1}{2}$

12. $8x^2 + 18x + 7 = 0$
    $(2x + 1)(4x + 7) = 0$
    $x = -\frac{1}{2}, -1\frac{3}{4}$

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

14. $-9x^2 - 32x + 16 = 0$
    $-(x + 4)(9x - 4) = 0$
    $x = -4, \frac{4}{9}$

15. $-8x^2 + 18x - 7 = 0$
    $-(2x - 1)(4x - 7) = 0$
    $x = \frac{1}{2}, 1\frac{3}{4}$

16. $-7x^2 - 32x + 15 = 0$
    $-(x + 5)(7x - 3) = 0$
    $x = -5, \frac{3}{7}$

17. $8x^2 + 45x - 18 = 0$
    $(x + 6)(8x - 3) = 0$
    $x = -6, \frac{3}{8}$

18. $4x^2 + 16x + 7 = 0$
    $(2x + 7)(2x + 1) = 0$
    $x = -3\frac{1}{2}, -\frac{1}{2}$

19. $-2x^2 + 21x - 49 = 0$
    $-(2x - 7)(x - 7) = 0$
    $x = 3\frac{1}{2}, 7$

20. $7x^2 + 10x - 8 = 0$
    $(7x - 4)(x + 2) = 0$
    $x = \frac{4}{7}, -2$

Solving Quadratic Equations (F)

Name:_____

Date:_____

Solve each equation for x.

1. $-8x^2 + 18x + 5 = 0$

2. $9x^2 - 49x - 30 = 0$

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

4. $6x^2 - 43x + 72 = 0$

5. $6x^2 - 11x - 21 = 0$

6. $4x^2 - 81 = 0$

7. $8x^2 + 61x - 24 = 0$

8. $-6x^2 + 17x + 28 = 0$

9. $-6x^2 + 11x + 7 = 0$

10. $-8x^2 + 37x + 15 = 0$

11. $3x^2 + 25x - 18 = 0$

12. $9x^2 - 15x - 14 = 0$

13. $-4x^2 - 19x + 5 = 0$

14. $7x^2 + 55x + 42 = 0$

15. $-5x^2 - 9x - 4 = 0$

16. $8x^2 + 75x + 27 = 0$

17. $x^2 + 3x - 54 = 0$

18. $-3x^2 + 25x - 28 = 0$

19. $6x^2 + 41x - 56 = 0$

20. $-7x^2 - 47x + 14 = 0$

Solving Quadratic Equations (F) Answers

Name: _____

Date: _____

Solve each equation for x.

1. $-8x^2 + 18x + 5 = 0$
   $-(2x - 5)(4x + 1) = 0$
   $x = 2\frac{1}{2}, -\frac{1}{4}$

2. $9x^2 - 49x - 30 = 0$
   $(9x + 5)(x - 6) = 0$
   $x = -\frac{5}{9}, 6$

3. $-x^2 - 2x - 1 = 0$
   $-(x + 1)(x + 1) = -(x + 1)^2 = 0$
   $x = -1$

4. $6x^2 - 43x + 72 = 0$
   $(2x - 9)(3x - 8) = 0$
   $x = 4\frac{1}{2}, 2\frac{2}{3}$

5. $6x^2 - 11x - 21 = 0$
   $(x - 3)(6x + 7) = 0$
   $x = 3, -1\frac{1}{6}$

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

7. $8x^2 + 61x - 24 = 0$
   $(8x - 3)(x + 8) = 0$
   $x = \frac{3}{8}, -8$

8. $-6x^2 + 17x + 28 = 0$
   $-(x - 4)(6x + 7) = 0$
   $x = 4, -1\frac{1}{6}$

9. $-6x^2 + 11x + 7 = 0$
   $-(2x + 1)(3x - 7) = 0$
   $x = -\frac{1}{2}, 2\frac{1}{3}$

10. $-8x^2 + 37x + 15 = 0$
    $-(8x + 3)(x - 5) = 0$
    $x = -\frac{3}{8}, 5$

11. $3x^2 + 25x - 18 = 0$
    $(x + 9)(3x - 2) = 0$
    $x = -9, \frac{2}{3}$

12. $9x^2 - 15x - 14 = 0$
    $(3x - 7)(3x + 2) = 0$
    $x = 2\frac{1}{3}, -\frac{2}{3}$

13. $-4x^2 - 19x + 5 = 0$
    $-(4x - 1)(x + 5) = 0$
    $x = \frac{1}{4}, -5$

14. $7x^2 + 55x + 42 = 0$
    $(x + 7)(7x + 6) = 0$
    $x = -7, -\frac{6}{7}$

15. $-5x^2 - 9x - 4 = 0$
    $-(5x + 4)(x + 1) = 0$
    $x = -\frac{4}{5}, -1$

16. $8x^2 + 75x + 27 = 0$
    $(x + 9)(8x + 3) = 0$
    $x = -9, -\frac{3}{8}$

17. $x^2 + 3x - 54 = 0$
    $(x + 9)(x - 6) = 0$
    $x = -9, 6$

18. $-3x^2 + 25x - 28 = 0$
    $-(x - 7)(3x - 4) = 0$
    $x = 7, 1\frac{1}{3}$

19. $6x^2 + 41x - 56 = 0$
    $(x + 8)(6x - 7) = 0$
    $x = -8, 1\frac{1}{6}$

20. $-7x^2 - 47x + 14 = 0$
    $-(x + 7)(7x - 2) = 0$
    $x = -7, \frac{2}{7}$

Solving Quadratic Equations (G)

Name: _____

Solve each equation for x.

1. $8x^2 - 2x - 15 = 0$

2. $-3x^2 + 28x - 32 = 0$

3. $6x^2 - 17x - 14 = 0$

4. $-7x^2 - 33x + 54 = 0$

5. $-6x^2 - 29x - 35 = 0$

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

7. $x^2 + 10x + 21 = 0$

8. $-2x^2 - 15x - 25 = 0$

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

10. $-5x^2 - 42x - 49 = 0$

11. $-2x^2 - 3x + 27 = 0$

12. $-7x^2 - 43x + 42 = 0$

13. $x^2 + 7x + 6 = 0$

14. $4x^2 - 17x + 4 = 0$

15. $7x^2 - 2x - 9 = 0$

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

17. $-6x^2 + 41x + 56 = 0$

18. $7x^2 + 34x - 48 = 0$

19. $4x^2 + 9x + 5 = 0$

20. $-7x^2 - 55x + 72 = 0$

Solving Quadratic Equations (G) Answers

Name: _____

Date: _____

Solve each equation for x.

1. $8x^2 - 2x - 15 = 0$
   $(4x + 5)(2x - 3) = 0$
   $x = -1\frac{1}{4}, 1\frac{1}{2}$

2. $-3x^2 + 28x - 32 = 0$
   $-(x - 8)(3x - 4) = 0$
   $x = 8, 1\frac{1}{3}$

3. $6x^2 - 17x - 14 = 0$
   $(2x - 7)(3x + 2) = 0$
   $x = 3\frac{1}{2}, -\frac{2}{3}$

4. $-7x^2 - 33x + 54 = 0$
   $-(7x - 9)(x + 6) = 0$
   $x = 1\frac{2}{7}, -6$

5. $-6x^2 - 29x - 35 = 0$
   $-(3x + 7)(2x + 5) = 0$
   $x = -2\frac{1}{3}, -2\frac{1}{2}$

6. $2x^2 - 15x + 7 = 0$
   $(x - 7)(2x - 1) = 0$
   $x = 7, \frac{1}{2}$

7. $x^2 + 10x + 21 = 0$
   $(x + 7)(x + 3) = 0$
   $x = -7, -3$

8. $-2x^2 - 15x - 25 = 0$
   $-(x + 5)(2x + 5) = 0$
   $x = -5, -2\frac{1}{2}$

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

10. $-5x^2 - 42x - 49 = 0$
    $-(x + 7)(5x + 7) = 0$
    $x = -7, -1\frac{2}{5}$

11. $-2x^2 - 3x + 27 = 0$
    $-(x - 3)(2x + 9) = 0$
    $x = 3, -4\frac{1}{2}$

12. $-7x^2 - 43x + 42 = 0$
    $-(7x - 6)(x + 7) = 0$
    $x = \frac{6}{7}, -7$

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

14. $4x^2 - 17x + 4 = 0$
    $(4x - 1)(x - 4) = 0$
    $x = \frac{1}{4}, 4$

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

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

17. $-6x^2 + 41x + 56 = 0$
    $-(x - 8)(6x + 7) = 0$
    $x = 8, -1\frac{1}{6}$

18. $7x^2 + 34x - 48 = 0$
    $(x + 6)(7x - 8) = 0$
    $x = -6, 1\frac{1}{7}$

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

20. $-7x^2 - 55x + 72 = 0$
    $-(x + 9)(7x - 8) = 0$
    $x = -9, 1\frac{1}{7}$

Solving Quadratic Equations (H)

Name:_____   Date:_____

Solve each equation for x.

1. $-9x^2 - 45x - 56 = 0$

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

3. $9x^2 + 11x + 2 = 0$

4. $4x^2 - 20x + 9 = 0$

5. $5x^2 + 29x + 20 = 0$

6. $4x^2 + 27x - 81 = 0$

7. $-3x^2 - x + 24 = 0$

8. $-6x^2 + 17x - 10 = 0$

9. $6x^2 + 31x + 5 = 0$

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

11. $3x^2 - 17x - 6 = 0$

12. $-6x^2 + 7x - 2 = 0$

13. $2x^2 + 5x - 63 = 0$

14. $2x^2 - 13x + 18 = 0$

15. $5x^2 + 13x + 6 = 0$

16. $4x^2 + 25x - 56 = 0$

17. $9x^2 + 25x - 6 = 0$

18. $-4x^2 + 13x + 12 = 0$

19. $8x^2 + 42x + 49 = 0$

20. $-8x^2 + 35x - 12 = 0$

Solving Quadratic Equations (H) Answers

Name: _____

Date: _____

Solve each equation for x.

1. $-9x^2 - 45x - 56 = 0$
   $-(3x + 8)(3x + 7) = 0$
   $x = -2\frac{2}{3}, -2\frac{1}{3}$

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

3. $9x^2 + 11x + 2 = 0$
   $(9x + 2)(x + 1) = 0$
   $x = -\frac{2}{9}, -1$

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

5. $5x^2 + 29x + 20 = 0$
   $(5x + 4)(x + 5) = 0$
   $x = -\frac{4}{5}, -5$

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

7. $-3x^2 - x + 24 = 0$
   $-(x + 3)(3x - 8) = 0$
   $x = -3, 2\frac{2}{3}$

8. $-6x^2 + 17x - 10 = 0$
   $-(6x - 5)(x - 2) = 0$
   $x = \frac{5}{6}, 2$

9. $6x^2 + 31x + 5 = 0$
   $(6x + 1)(x + 5) = 0$
   $x = -\frac{1}{6}, -5$

10. $2x^2 - 7x - 4 = 0$
    $(x - 4)(2x + 1) = 0$
    $x = 4, -\frac{1}{2}$

11. $3x^2 - 17x - 6 = 0$
    $(x - 6)(3x + 1) = 0$
    $x = 6, -\frac{1}{3}$

12. $-6x^2 + 7x - 2 = 0$
    $-(2x - 1)(3x - 2) = 0$
    $x = \frac{1}{2}, \frac{2}{3}$

13. $2x^2 + 5x - 63 = 0$
    $(2x - 9)(x + 7) = 0$
    $x = 4\frac{1}{2}, -7$

14. $2x^2 - 13x + 18 = 0$
    $(2x - 9)(x - 2) = 0$
    $x = 4\frac{1}{2}, 2$

15. $5x^2 + 13x + 6 = 0$
    $(x + 2)(5x + 3) = 0$
    $x = -2, -\frac{3}{5}$

16. $4x^2 + 25x - 56 = 0$
    $(x + 8)(4x - 7) = 0$
    $x = -8, 1\frac{3}{4}$

17. $9x^2 + 25x - 6 = 0$
    $(9x - 2)(x + 3) = 0$
    $x = \frac{2}{9}, -3$

18. $-4x^2 + 13x + 12 = 0$
    $-(4x + 3)(x - 4) = 0$
    $x = -\frac{3}{4}, 4$

19. $8x^2 + 42x + 49 = 0$
    $(2x + 7)(4x + 7) = 0$
    $x = -3\frac{1}{2}, -1\frac{3}{4}$

20. $-8x^2 + 35x - 12 = 0$
    $-(8x - 3)(x - 4) = 0$
    $x = \frac{3}{8}, 4$

Solving Quadratic Equations (I)

Name: _____　　　　　Date: _____

Solve each equation for x.

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

2. $-9x^2 - 14x + 8 = 0$

3. $6x^2 + 5x - 56 = 0$

4. $3x^2 - 28x + 9 = 0$

5. $6x^2 - 13x + 2 = 0$

6. $-6x^2 + 37x + 35 = 0$

7. $-3x^2 - 5x - 2 = 0$

8. $8x^2 + 54x + 81 = 0$

9. $2x^2 - 19x + 24 = 0$

10. $9x^2 - 76x - 45 = 0$

11. $8x^2 + 35x + 12 = 0$

12. $-5x^2 - 16x - 3 = 0$

13. $-8x^2 + 65x + 63 = 0$

14. $6x^2 - 5x + 1 = 0$

15. $2x^2 - 9x - 18 = 0$

16. $-4x^2 - 8x + 21 = 0$

17. $-9x^2 + 49 = 0$

18. $-4x^2 + 9 = 0$

19. $-6x^2 - 13x - 5 = 0$

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

Solving Quadratic Equations (I) Answers

Name: _____

Date: _____

Solve each equation for x.

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

2. $-9x^2 - 14x + 8 = 0$
   $-(9x - 4)(x + 2) = 0$
   $x = \frac{4}{9}, -2$

3. $6x^2 + 5x - 56 = 0$
   $(2x + 7)(3x - 8) = 0$
   $x = -3\frac{1}{2}, 2\frac{2}{3}$

4. $3x^2 - 28x + 9 = 0$
   $(3x - 1)(x - 9) = 0$
   $x = \frac{1}{3}, 9$

5. $6x^2 - 13x + 2 = 0$
   $(6x - 1)(x - 2) = 0$
   $x = \frac{1}{6}, 2$

6. $-6x^2 + 37x + 35 = 0$
   $-(6x + 5)(x - 7) = 0$
   $x = -\frac{5}{6}, 7$

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

8. $8x^2 + 54x + 81 = 0$
   $(2x + 9)(4x + 9) = 0$
   $x = -4\frac{1}{2}, -2\frac{1}{4}$

9. $2x^2 - 19x + 24 = 0$
   $(x - 8)(2x - 3) = 0$
   $x = 8, 1\frac{1}{2}$

10. $9x^2 - 76x - 45 = 0$
    $(9x + 5)(x - 9) = 0$
    $x = -\frac{5}{9}, 9$

11. $8x^2 + 35x + 12 = 0$
    $(x + 4)(8x + 3) = 0$
    $x = -4, -\frac{3}{8}$

12. $-5x^2 - 16x - 3 = 0$
    $-(5x + 1)(x + 3) = 0$
    $x = -\frac{1}{5}, -3$

13. $-8x^2 + 65x + 63 = 0$
    $-(8x + 7)(x - 9) = 0$
    $x = -\frac{7}{8}, 9$

14. $6x^2 - 5x + 1 = 0$
    $(2x - 1)(3x - 1) = 0$
    $x = \frac{1}{2}, \frac{1}{3}$

15. $2x^2 - 9x - 18 = 0$
    $(2x + 3)(x - 6) = 0$
    $x = -1\frac{1}{2}, 6$

16. $-4x^2 - 8x + 21 = 0$
    $-(2x - 3)(2x + 7) = 0$
    $x = 1\frac{1}{2}, -3\frac{1}{2}$

17. $-9x^2 + 49 = 0$
    $-(3x + 7)(3x - 7) = 0$
    $x = -2\frac{1}{3}, 2\frac{1}{3}$

18. $-4x^2 + 9 = 0$
    $-(2x + 3)(2x - 3) = 0$
    $x = -1\frac{1}{2}, 1\frac{1}{2}$

19. $-6x^2 - 13x - 5 = 0$
    $-(3x + 5)(2x + 1) = 0$
    $x = -1\frac{2}{3}, -\frac{1}{2}$

20. $2x^2 + 13x + 20 = 0$
    $(x + 4)(2x + 5) = 0$
    $x = -4, -2\frac{1}{2}$

Solving Quadratic Equations (J)

Name: _____   Date: _____

Solve each equation for x.

1. $2x^2 - 5x - 42 = 0$

2. $9x^2 - 71x - 8 = 0$

3. $4x^2 + 28x + 45 = 0$

4. $7x^2 + 69x + 54 = 0$

5. $8x^2 - 55x - 7 = 0$

6. $x^2 - 64 = 0$

7. $-9x^2 - 3x + 56 = 0$

8. $8x^2 + 46x + 63 = 0$

9. $9x^2 + 77x - 36 = 0$

10. $7x^2 - 43x + 6 = 0$

11. $6x^2 + 7x + 2 = 0$

12. $7x^2 + 26x + 15 = 0$

13. $-6x^2 + 23x + 4 = 0$

14. $4x^2 + 8x + 3 = 0$

15. $-6x^2 - 37x - 56 = 0$

16. $-8x^2 - 50x - 63 = 0$

17. $-2x^2 + 13x - 21 = 0$

18. $5x^2 + 22x - 15 = 0$

19. $5x^2 - 39x + 28 = 0$

20. $6x^2 + 19x + 14 = 0$

Solving Quadratic Equations (J) Answers

Name: _____

Date: _____

Solve each equation for x.

1. $2x^2 - 5x - 42 = 0$
   $(x - 6)(2x + 7) = 0$
   $x = 6, -3\frac{1}{2}$

2. $9x^2 - 71x - 8 = 0$
   $(x - 8)(9x + 1) = 0$
   $x = 8, -\frac{1}{9}$

3. $4x^2 + 28x + 45 = 0$
   $(2x + 5)(2x + 9) = 0$
   $x = -2\frac{1}{2}, -4\frac{1}{2}$

4. $7x^2 + 69x + 54 = 0$
   $(7x + 6)(x + 9) = 0$
   $x = -\frac{6}{7}, -9$

5. $8x^2 - 55x - 7 = 0$
   $(8x + 1)(x - 7) = 0$
   $x = -\frac{1}{8}, 7$

6. $x^2 - 64 = 0$
   $(x - 8)(x + 8) = 0$
   $x = 8, -8$

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

8. $8x^2 + 46x + 63 = 0$
   $(2x + 7)(4x + 9) = 0$
   $x = -3\frac{1}{2}, -2\frac{1}{4}$

9. $9x^2 + 77x - 36 = 0$
   $(x + 9)(9x - 4) = 0$
   $x = -9, \frac{4}{9}$

10. $7x^2 - 43x + 6 = 0$
    $(7x - 1)(x - 6) = 0$
    $x = \frac{1}{7}, 6$

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

12. $7x^2 + 26x + 15 = 0$
    $(x + 3)(7x + 5) = 0$
    $x = -3, -\frac{5}{7}$

13. $-6x^2 + 23x + 4 = 0$
    $-(x - 4)(6x + 1) = 0$
    $x = 4, -\frac{1}{6}$

14. $4x^2 + 8x + 3 = 0$
    $(2x + 1)(2x + 3) = 0$
    $x = -\frac{1}{2}, -1\frac{1}{2}$

15. $-6x^2 - 37x - 56 = 0$
    $-(3x + 8)(2x + 7) = 0$
    $x = -2\frac{2}{3}, -3\frac{1}{2}$

16. $-8x^2 - 50x - 63 = 0$
    $-(4x + 7)(2x + 9) = 0$
    $x = -1\frac{3}{4}, -4\frac{1}{2}$

17. $-2x^2 + 13x - 21 = 0$
    $-(2x - 7)(x - 3) = 0$
    $x = 3\frac{1}{2}, 3$

18. $5x^2 + 22x - 15 = 0$
    $(x + 5)(5x - 3) = 0$
    $x = -5, \frac{3}{5}$

19. $5x^2 - 39x + 28 = 0$
    $(x - 7)(5x - 4) = 0$
    $x = 7, \frac{4}{5}$

20. $6x^2 + 19x + 14 = 0$
    $(6x + 7)(x + 2) = 0$
    $x = -1\frac{1}{6}, -2$

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