

Solving Quadratic Equations (H)

Name: _____

Date: _____

Solve each equation for x.

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

11. $-3x^2 - 23x + 36 = 0$

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

12. $2x^2 - 17x + 36 = 0$

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

13. $-4x^2 - 8x - 3 = 0$

4. $3x^2 + 19x - 40 = 0$

14. $3x^2 - 7x + 4 = 0$

5. $-4x^2 - 24x - 35 = 0$

15. $-4x^2 - 13x - 9 = 0$

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

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

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

17. $2x^2 + 9x - 81 = 0$

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

18. $x^2 - 16 = 0$

9. $-x^2 - 12x - 32 = 0$

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

10. $-3x^2 + 14x + 49 = 0$

20. $-2x^2 - 13x + 24 = 0$

Solving Quadratic Equations (H) Answers

Name: _____

Date: _____

Solve each equation for x.

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

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

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

4. $3x^2 + 19x - 40 = 0$
 $(x + 8)(3x - 5) = 0$
 $x = -8, 1\frac{2}{3}$

5. $-4x^2 - 24x - 35 = 0$
 $-(2x + 7)(2x + 5) = 0$
 $x = -3\frac{1}{2}, -2\frac{1}{2}$

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

7. $4x^2 + 24x + 35 = 0$
 $(2x + 5)(2x + 7) = 0$
 $x = -2\frac{1}{2}, -3\frac{1}{2}$

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

9. $-x^2 - 12x - 32 = 0$
 $-(x + 8)(x + 4) = 0$
 $x = -8, -4$

10. $-3x^2 + 14x + 49 = 0$
 $-(3x + 7)(x - 7) = 0$
 $x = -2\frac{1}{3}, 7$

11. $-3x^2 - 23x + 36 = 0$
 $-(x + 9)(3x - 4) = 0$
 $x = -9, 1\frac{1}{3}$

12. $2x^2 - 17x + 36 = 0$
 $(x - 4)(2x - 9) = 0$
 $x = 4, 4\frac{1}{2}$

13. $-4x^2 - 8x - 3 = 0$
 $-(2x + 3)(2x + 1) = 0$
 $x = -1\frac{1}{2}, -\frac{1}{2}$

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

15. $-4x^2 - 13x - 9 = 0$
 $-(x + 1)(4x + 9) = 0$
 $x = -1, -2\frac{1}{4}$

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

17. $2x^2 + 9x - 81 = 0$
 $(2x - 9)(x + 9) = 0$
 $x = 4\frac{1}{2}, -9$

18. $x^2 - 16 = 0$
 $(x + 4)(x - 4) = 0$
 $x = -4, 4$

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

20. $-2x^2 - 13x + 24 = 0$
 $-(2x - 3)(x + 8) = 0$
 $x = 1\frac{1}{2}, -8$