Solving Quadratic Equations (E)

Name: _____ Date: _____

Solve each equation for x.

1. $4x^2 - 4x - 15 = 0$
2. $x^2 - 49 = 0$
3. $2x^2 + 9x + 9 = 0$
4. $4x^2 - 5x - 6 = 0$
5. $3x^2 - 14x + 16 = 0$
6. $4x^2 + 16x + 15 = 0$
7. $3x^2 + 23x - 8 = 0$
8. $2x^2 - 3x - 5 = 0$
9. $2x^2 + 7x + 6 = 0$
10. $4x^2 + 8x + 3 = 0$
11. $4x^2 + 31x - 45 = 0$
12. $2x^2 - 11x - 63 = 0$
13. $2x^2 + 13x + 6 = 0$
14. $x^2 + 8x + 15 = 0$
15. $4x^2 + 21x - 49 = 0$
16. $x^2 - 7x + 10 = 0$
17. $3x^2 + 8x + 5 = 0$
18. $2x^2 + 15x - 27 = 0$
19. $4x^2 - 4x - 35 = 0$
20. $2x^2 - 7x - 49 = 0$

Solving Quadratic Equations (E) Answers

Name: _____ Date: _____

Solve each equation for x.

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

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

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

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

5. $3x^2 - 14x + 16 = 0$
   $(3x - 8)(x - 2) = 0$
   $x = 2\frac{2}{3}, 2$

6. $4x^2 + 16x + 15 = 0$
   $(2x + 5)(2x + 3) = 0$
   $x = -2\frac{1}{2}, -1\frac{1}{2}$

7. $3x^2 + 23x - 8 = 0$
   $(x + 8)(3x - 1) = 0$
   $x = -8, \frac{1}{3}$

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

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

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

11. $4x^2 + 31x - 45 = 0$
    $(4x - 5)(x + 9) = 0$
    $x = 1\frac{1}{4}, -9$

12. $2x^2 - 11x - 63 = 0$
    $(x - 9)(2x + 7) = 0$
    $x = 9, -3\frac{1}{2}$

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

14. $x^2 + 8x + 15 = 0$
    $(x + 5)(x + 3) = 0$
    $x = -5, -3$

15. $4x^2 + 21x - 49 = 0$
    $(x + 7)(4x - 7) = 0$
    $x = -7, 1\frac{3}{4}$

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

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

18. $2x^2 + 15x - 27 = 0$
    $(x + 9)(2x - 3) = 0$
    $x = -9, 1\frac{1}{2}$

19. $4x^2 - 4x - 35 = 0$
    $(2x + 5)(2x - 7) = 0$
    $x = -2\frac{1}{2}, 3\frac{1}{2}$

20. $2x^2 - 7x - 49 = 0$
    $(x - 7)(2x + 7) = 0$
    $x = 7, -3\frac{1}{2}$