Solving Quadratic Equations (E)

Name: _____ Date: _____

Solve each equation for x.

1. $48x^2 - 20x + 2 = 0$
2. $-12x^2 + 74x + 70 = 0$
3. $-100x^2 + 205x + 45 = 0$
4. $-40x^2 - 66x - 14 = 0$
5. $72x^2 - 3x - 30 = 0$
6. $-64x^2 + 324 = 0$
7. $48x^2 + 162x - 243 = 0$
8. $56x^2 - 50x - 16 = 0$
9. $-4x^2 + 10x + 6 = 0$
10. $81x^2 + 252x + 96 = 0$
11. $18x^2 + 116x - 70 = 0$
12. $-175x^2 - 20x + 20 = 0$
13. $-160x^2 - 116x - 12 = 0$
14. $16x^2 + 64x + 28 = 0$
15. $-168x^2 + 356x - 180 = 0$
16. $160x^2 - 44x - 252 = 0$
17. $-45x^2 - 42x + 48 = 0$
18. $60x^2 + 64x + 16 = 0$
19. $12x^2 - 22x - 20 = 0$
20. $-24x^2 + 40x - 6 = 0$

Solving Quadratic Equations (E) Answers

Name: _____ Date: _____

Solve each equation for x.

1. $48x^2 - 20x + 2 = 0$
   $2(4x - 1)(6x - 1) = 0$
   $x = \frac{1}{4}, \frac{1}{6}$

2. $-12x^2 + 74x + 70 = 0$
   $-2(6x + 5)(x - 7) = 0$
   $x = -\frac{5}{6}, 7$

3. $-100x^2 + 205x + 45 = 0$
   $-5(5x + 1)(4x - 9) = 0$
   $x = -\frac{1}{5}, 2\frac{1}{4}$

4. $-40x^2 - 66x - 14 = 0$
   $-2(5x + 7)(4x + 1) = 0$
   $x = -1\frac{2}{5}, -\frac{1}{4}$

5. $72x^2 - 3x - 30 = 0$
   $3(8x + 5)(3x - 2) = 0$
   $x = -\frac{5}{8}, \frac{2}{3}$

6. $-64x^2 + 324 = 0$
   $-4(4x - 9)(4x + 9) = 0$
   $x = 2\frac{1}{4}, -2\frac{1}{4}$

7. $48x^2 + 162x - 243 = 0$
   $3(8x - 9)(2x + 9) = 0$
   $x = 1\frac{1}{8}, -4\frac{1}{2}$

8. $56x^2 - 50x - 16 = 0$
   $2(7x - 8)(4x + 1) = 0$
   $x = 1\frac{1}{7}, -\frac{1}{4}$

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

10. $81x^2 + 252x + 96 = 0$
    $3(9x + 4)(3x + 8) = 0$
    $x = -\frac{4}{9}, -2\frac{2}{3}$

11. $18x^2 + 116x - 70 = 0$
    $2(x + 7)(9x - 5) = 0$
    $x = -7, \frac{5}{9}$

12. $-175x^2 - 20x + 20 = 0$
    $-5(5x + 2)(7x - 2) = 0$
    $x = -\frac{2}{5}, \frac{2}{7}$

13. $-160x^2 - 116x - 12 = 0$
    $-4(8x + 1)(5x + 3) = 0$
    $x = -\frac{1}{8}, -\frac{3}{5}$

14. $16x^2 + 64x + 28 = 0$
    $4(2x + 1)(2x + 7) = 0$
    $x = -\frac{1}{2}, -3\frac{1}{2}$

15. $-168x^2 + 356x - 180 = 0$
    $-4(6x - 5)(7x - 9) = 0$
    $x = \frac{5}{6}, 1\frac{2}{7}$

16. $160x^2 - 44x - 252 = 0$
    $4(5x - 7)(8x + 9) = 0$
    $x = 1\frac{2}{5}, -1\frac{1}{8}$

17. $-45x^2 - 42x + 48 = 0$
    $-3(5x + 8)(3x - 2) = 0$
    $x = -1\frac{3}{5}, \frac{2}{3}$

18. $60x^2 + 64x + 16 = 0$
    $4(5x + 2)(3x + 2) = 0$
    $x = -\frac{2}{5}, -\frac{2}{3}$

19. $12x^2 - 22x - 20 = 0$
    $2(3x + 2)(2x - 5) = 0$
    $x = -\frac{2}{3}, 2\frac{1}{2}$

20. $-24x^2 + 40x - 6 = 0$
    $-2(2x - 3)(6x - 1) = 0$
    $x = 1\frac{1}{2}, \frac{1}{6}$