Solving Quadratic Equations (G)

Name: _____ Date: _____

Solve each equation for x.

1. $12x^2 - 4x - 16 = 0$
2. $-16x^2 + 96x - 108 = 0$
3. $-6x^2 + 3x + 45 = 0$
4. $10x^2 - 94x + 36 = 0$
5. $3x^2 + 15x - 72 = 0$
6. $8x^2 + 86x + 126 = 0$
7. $15x^2 + 40x - 80 = 0$
8. $9x^2 + 57x + 84 = 0$
9. $-15x^2 - 50x + 40 = 0$
10. $-4x^2 - 42x - 98 = 0$
11. $-4x^2 + 36x - 32 = 0$
12. $6x^2 + 45x + 75 = 0$
13. $3x^2 - 6x - 45 = 0$
14. $-20x^2 - 76x + 16 = 0$
15. $-8x^2 + 24x - 10 = 0$
16. $-10x^2 + 55x + 315 = 0$
17. $-16x^2 - 20x + 84 = 0$
18. $16x^2 - 128x + 252 = 0$
19. $5x^2 + 85x + 360 = 0$
20. $10x^2 - 75x - 40 = 0$

Solving Quadratic Equations (G) Answers

Name: _____ Date: _____

Solve each equation for x.

1. $12x^2 - 4x - 16 = 0$
   $4(3x - 4)(x + 1) = 0$
   $x = 1\frac{1}{3}, -1$

2. $-16x^2 + 96x - 108 = 0$
   $-4(2x - 3)(2x - 9) = 0$
   $x = 1\frac{1}{2}, 4\frac{1}{2}$

3. $-6x^2 + 3x + 45 = 0$
   $-3(x - 3)(2x + 5) = 0$
   $x = 3, -2\frac{1}{2}$

4. $10x^2 - 94x + 36 = 0$
   $2(x - 9)(5x - 2) = 0$
   $x = 9, \frac{2}{5}$

5. $3x^2 + 15x - 72 = 0$
   $3(x + 8)(x - 3) = 0$
   $x = -8, 3$

6. $8x^2 + 86x + 126 = 0$
   $2(4x + 7)(x + 9) = 0$
   $x = -1\frac{3}{4}, -9$

7. $15x^2 + 40x - 80 = 0$
   $5(3x - 4)(x + 4) = 0$
   $x = 1\frac{1}{3}, -4$

8. $9x^2 + 57x + 84 = 0$
   $3(3x + 7)(x + 4) = 0$
   $x = -2\frac{1}{3}, -4$

9. $-15x^2 - 50x + 40 = 0$
   $-5(3x - 2)(x + 4) = 0$
   $x = \frac{2}{3}, -4$

10. $-4x^2 - 42x - 98 = 0$
    $-2(x + 7)(2x + 7) = 0$
    $x = -7, -3\frac{1}{2}$

11. $-4x^2 + 36x - 32 = 0$
    $-4(x - 8)(x - 1) = 0$
    $x = 8, 1$

12. $6x^2 + 45x + 75 = 0$
    $3(2x + 5)(x + 5) = 0$
    $x = -2\frac{1}{2}, -5$

13. $3x^2 - 6x - 45 = 0$
    $3(x - 5)(x + 3) = 0$
    $x = 5, -3$

14. $-20x^2 - 76x + 16 = 0$
    $-4(5x - 1)(x + 4) = 0$
    $x = \frac{1}{5}, -4$

15. $-8x^2 + 24x - 10 = 0$
    $-2(2x - 1)(2x - 5) = 0$
    $x = \frac{1}{2}, 2\frac{1}{2}$

16. $-10x^2 + 55x + 315 = 0$
    $-5(x - 9)(2x + 7) = 0$
    $x = 9, -3\frac{1}{2}$

17. $-16x^2 - 20x + 84 = 0$
    $-4(x + 3)(4x - 7) = 0$
    $x = -3, 1\frac{3}{4}$

18. $16x^2 - 128x + 252 = 0$
    $4(2x - 7)(2x - 9) = 0$
    $x = 3\frac{1}{2}, 4\frac{1}{2}$

19. $5x^2 + 85x + 360 = 0$
    $5(x + 9)(x + 8) = 0$
    $x = -9, -8$

20. $10x^2 - 75x - 40 = 0$
    $5(x - 8)(2x + 1) = 0$
    $x = 8, -\frac{1}{2}$