Solving Quadratic Equations (H)

Name: _____ Date: _____

Solve each equation for x.

1. $10x^2 + 35x + 25 = 0$
2. $20x^2 + 68x - 160 = 0$
3. $20x^2 - 15x - 50 = 0$
4. $-20x^2 + 120x - 135 = 0$
5. $20x^2 + 76x - 120 = 0$
6. $3x^2 - 30x + 63 = 0$
7. $-6x^2 + 38x + 80 = 0$
8. $12x^2 - 99x + 162 = 0$
9. $2x^2 + 26x + 80 = 0$
10. $6x^2 + 57x + 27 = 0$
11. $20x^2 - 135x + 90 = 0$
12. $-4x^2 + 56x - 196 = 0$
13. $6x^2 + 81x + 243 = 0$
14. $-3x^2 + 12x + 63 = 0$
15. $12x^2 - 100x + 32 = 0$
16. $-16x^2 + 64x - 28 = 0$
17. $8x^2 - 62x - 16 = 0$
18. $12x^2 + 21x - 108 = 0$
19. $16x^2 - 148x + 252 = 0$
20. $20x^2 + 168x - 108 = 0$

Solving Quadratic Equations (H) Answers

Name: _____ Date: _____

Solve each equation for x.

1. $10x^2 + 35x + 25 = 0$
   $5(2x+5)(x+1) = 0$
   $x = -2\frac{1}{2}, -1$

2. $20x^2 + 68x - 160 = 0$
   $4(5x-8)(x+5) = 0$
   $x = 1\frac{3}{5}, -5$

3. $20x^2 - 15x - 50 = 0$
   $5(4x+5)(x-2) = 0$
   $x = -1\frac{1}{4}, 2$

4. $-20x^2 + 120x - 135 = 0$
   $-5(2x-3)(2x-9) = 0$
   $x = 1\frac{1}{2}, 4\frac{1}{2}$

5. $20x^2 + 76x - 120 = 0$
   $4(x+5)(5x-6) = 0$
   $x = -5, 1\frac{1}{5}$

6. $3x^2 - 30x + 63 = 0$
   $3(x-3)(x-7) = 0$
   $x = 3, 7$

7. $-6x^2 + 38x + 80 = 0$
   $-2(x-8)(3x+5) = 0$
   $x = 8, -1\frac{2}{3}$

8. $12x^2 - 99x + 162 = 0$
   $3(4x-9)(x-6) = 0$
   $x = 2\frac{1}{4}, 6$

9. $2x^2 + 26x + 80 = 0$
   $2(x+5)(x+8) = 0$
   $x = -5, -8$

10. $6x^2 + 57x + 27 = 0$
    $3(x+9)(2x+1) = 0$
    $x = -9, -\frac{1}{2}$

11. $20x^2 - 135x + 90 = 0$
    $5(x-6)(4x-3) = 0$
    $x = 6, \frac{3}{4}$

12. $-4x^2 + 56x - 196 = 0$
    $-4(x-7)(x-7) = -4(x-7)^2 = 0$
    $x = 7$

13. $6x^2 + 81x + 243 = 0$
    $3(2x+9)(x+9) = 0$
    $x = -4\frac{1}{2}, -9$

14. $-3x^2 + 12x + 63 = 0$
    $-3(x-7)(x+3) = 0$
    $x = 7, -3$

15. $12x^2 - 100x + 32 = 0$
    $4(x-8)(3x-1) = 0$
    $x = 8, \frac{1}{3}$

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

17. $8x^2 - 62x - 16 = 0$
    $2(x-8)(4x+1) = 0$
    $x = 8, -\frac{1}{4}$

18. $12x^2 + 21x - 108 = 0$
    $3(x+4)(4x-9) = 0$
    $x = -4, 2\frac{1}{4}$

19. $16x^2 - 148x + 252 = 0$
    $4(4x-9)(x-7) = 0$
    $x = 2\frac{1}{4}, 7$

20. $20x^2 + 168x - 108 = 0$
    $4(x+9)(5x-3) = 0$
    $x = -9, \frac{3}{5}$