Solving Quadratic Equations (H)

Name: _____ Date: _____

Solve each equation for x.

1. $5x^2 - 43x + 24 = 0$
2. $24x^2 - 47x - 21 = 0$
3. $18x^2 + x - 5 = 0$
4. $45x^2 + 29x - 30 = 0$
5. $32x^2 - 92x + 63 = 0$
6. $27x^2 - 12x - 4 = 0$
7. $49x^2 + 63x + 8 = 0$
8. $8x^2 - 17x + 2 = 0$
9. $4x^2 - 20x + 9 = 0$
10. $4x^2 - 19x - 5 = 0$
11. $18x^2 - 53x + 20 = 0$
12. $27x^2 - 60x + 25 = 0$
13. $5x^2 + 24x - 36 = 0$
14. $48x^2 - 34x - 5 = 0$
15. $42x^2 + 25x + 3 = 0$
16. $42x^2 + 103x + 63 = 0$
17. $40x^2 + 69x + 8 = 0$
18. $63x^2 - 64x + 16 = 0$
19. $24x^2 + 2x - 35 = 0$
20. $72x^2 - 23x - 4 = 0$

Solving Quadratic Equations (H) Answers

Name: _____ Date: _____

Solve each equation for x.

1. $5x^2 - 43x + 24 = 0$
   $(5x - 3)(x - 8) = 0$
   $x = \frac{3}{5}, 8$

2. $24x^2 - 47x - 21 = 0$
   $(3x - 7)(8x + 3) = 0$
   $x = 2\frac{1}{3}, -\frac{3}{8}$

3. $18x^2 + x - 5 = 0$
   $(9x + 5)(2x - 1) = 0$
   $x = -\frac{5}{9}, \frac{1}{2}$

4. $45x^2 + 29x - 30 = 0$
   $(9x - 5)(5x + 6) = 0$
   $x = \frac{5}{9}, -1\frac{1}{5}$

5. $32x^2 - 92x + 63 = 0$
   $(4x - 7)(8x - 9) = 0$
   $x = 1\frac{3}{4}, 1\frac{1}{8}$

6. $27x^2 - 12x - 4 = 0$
   $(9x + 2)(3x - 2) = 0$
   $x = -\frac{2}{9}, \frac{2}{3}$

7. $49x^2 + 63x + 8 = 0$
   $(7x + 1)(7x + 8) = 0$
   $x = -\frac{1}{7}, -1\frac{1}{7}$

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

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

10. $4x^2 - 19x - 5 = 0$
    $(4x + 1)(x - 5) = 0$
    $x = -\frac{1}{4}, 5$

11. $18x^2 - 53x + 20 = 0$
    $(2x - 5)(9x - 4) = 0$
    $x = 2\frac{1}{2}, \frac{4}{9}$

12. $27x^2 - 60x + 25 = 0$
    $(3x - 5)(9x - 5) = 0$
    $x = 1\frac{2}{3}, \frac{5}{9}$

13. $5x^2 + 24x - 36 = 0$
    $(5x - 6)(x + 6) = 0$
    $x = 1\frac{1}{5}, -6$

14. $48x^2 - 34x - 5 = 0$
    $(8x + 1)(6x - 5) = 0$
    $x = -\frac{1}{8}, \frac{5}{6}$

15. $42x^2 + 25x + 3 = 0$
    $(7x + 3)(6x + 1) = 0$
    $x = -\frac{3}{7}, -\frac{1}{6}$

16. $42x^2 + 103x + 63 = 0$
    $(6x + 7)(7x + 9) = 0$
    $x = -1\frac{1}{6}, -1\frac{2}{7}$

17. $40x^2 + 69x + 8 = 0$
    $(8x + 1)(5x + 8) = 0$
    $x = -\frac{1}{8}, -1\frac{3}{5}$

18. $63x^2 - 64x + 16 = 0$
    $(7x - 4)(9x - 4) = 0$
    $x = \frac{4}{7}, \frac{4}{9}$

19. $24x^2 + 2x - 35 = 0$
    $(4x + 5)(6x - 7) = 0$
    $x = -1\frac{1}{4}, 1\frac{1}{6}$

20. $72x^2 - 23x - 4 = 0$
    $(8x + 1)(9x - 4) = 0$
    $x = -\frac{1}{8}, \frac{4}{9}$