Solving Quadratic Equations (A)

Name: _____ Date: _____

Solve each equation for x.

1. $-36x^2 + 120x - 75 = 0$
2. $-45x^2 - 290x - 120 = 0$
3. $-144x^2 - 240x - 100 = 0$
4. $-144x^2 + 212x - 40 = 0$
5. $48x^2 + 118x + 14 = 0$
6. $192x^2 - 104x - 140 = 0$
7. $-16x^2 + 52x - 40 = 0$
8. $-75x^2 - 55x + 60 = 0$
9. $-8x^2 + 2 = 0$
10. $-30x^2 - 3x + 6 = 0$
11. $36x^2 + 72x - 64 = 0$
12. $-40x^2 + 375x - 135 = 0$
13. $-140x^2 + 8x + 96 = 0$
14. $-80x^2 + 12x + 224 = 0$
15. $-105x^2 + 33x + 216 = 0$
16. $10x^2 + 25x - 35 = 0$
17. $16x^2 - 36 = 0$
18. $72x^2 - 172x + 96 = 0$
19. $-35x^2 + 170x + 240 = 0$
20. $-120x^2 + 3x + 18 = 0$

Solving Quadratic Equations (A) Answers

Name: _____ Date: _____

Solve each equation for x.

1. $-36x^2 + 120x - 75 = 0$
   $-3(6x - 5)(2x - 5) = 0$
   $x = \frac{5}{6}, 2\frac{1}{2}$

2. $-45x^2 - 290x - 120 = 0$
   $-5(x + 6)(9x + 4) = 0$
   $x = -6, -\frac{4}{9}$

3. $-144x^2 - 240x - 100 = 0$
   $-4(6x + 5)(6x + 5) = -4(6x + 5)^2 = 0$
   $x = -\frac{5}{6}$

4. $-144x^2 + 212x - 40 = 0$
   $-4(9x - 2)(4x - 5) = 0$
   $x = \frac{2}{9}, 1\frac{1}{4}$

5. $48x^2 + 118x + 14 = 0$
   $2(3x + 7)(8x + 1) = 0$
   $x = -2\frac{1}{3}, -\frac{1}{8}$

6. $192x^2 - 104x - 140 = 0$
   $4(8x + 5)(6x - 7) = 0$
   $x = -\frac{5}{8}, 1\frac{1}{6}$

7. $-16x^2 + 52x - 40 = 0$
   $-4(4x - 5)(x - 2) = 0$
   $x = 1\frac{1}{4}, 2$

8. $-75x^2 - 55x + 60 = 0$
   $-5(3x + 4)(5x - 3) = 0$
   $x = -1\frac{1}{3}, \frac{3}{5}$

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

10. $-30x^2 - 3x + 6 = 0$
    $-3(5x - 2)(2x + 1) = 0$
    $x = \frac{2}{5}, -\frac{1}{2}$

11. $36x^2 + 72x - 64 = 0$
    $4(3x + 8)(3x - 2) = 0$
    $x = -2\frac{2}{3}, \frac{2}{3}$

12. $-40x^2 + 375x - 135 = 0$
    $-5(x - 9)(8x - 3) = 0$
    $x = 9, \frac{3}{8}$

13. $-140x^2 + 8x + 96 = 0$
    $-4(5x + 4)(7x - 6) = 0$
    $x = -\frac{4}{5}, \frac{6}{7}$

14. $-80x^2 + 12x + 224 = 0$
    $-4(4x - 7)(5x + 8) = 0$
    $x = 1\frac{3}{4}, -1\frac{3}{5}$

15. $-105x^2 + 33x + 216 = 0$
    $-3(7x + 9)(5x - 8) = 0$
    $x = -1\frac{2}{7}, 1\frac{3}{5}$

16. $10x^2 + 25x - 35 = 0$
    $5(2x + 7)(x - 1) = 0$
    $x = -3\frac{1}{2}, 1$

17. $16x^2 - 36 = 0$
    $4(2x - 3)(2x + 3) = 0$
    $x = 1\frac{1}{2}, -1\frac{1}{2}$

18. $72x^2 - 172x + 96 = 0$
    $4(9x - 8)(2x - 3) = 0$
    $x = \frac{8}{9}, 1\frac{1}{2}$

19. $-35x^2 + 170x + 240 = 0$
    $-5(7x + 8)(x - 6) = 0$
    $x = -1\frac{1}{7}, 6$

20. $-120x^2 + 3x + 18 = 0$
    $-3(8x + 3)(5x - 2) = 0$
    $x = -\frac{3}{8}, \frac{2}{5}$