Solving Quadratic Equations (E)

Name: _____ Date: _____

Solve each equation for x.

1. $72x^2 + 113x + 36 = 0$
2. $63x^2 - 76x + 21 = 0$
3. $12x^2 + 40x - 7 = 0$
4. $8x^2 - 22x - 63 = 0$
5. $42x^2 - 17x - 4 = 0$
6. $45x^2 + 62x + 21 = 0$
7. $5x^2 - 24x - 5 = 0$
8. $16x^2 - 40x + 25 = 0$
9. $42x^2 - 41x + 5 = 0$
10. $15x^2 - 28x + 12 = 0$
11. $10x^2 + 21x - 10 = 0$
12. $54x^2 + 3x - 2 = 0$
13. $10x^2 + 43x + 28 = 0$
14. $10x^2 + 13x - 30 = 0$
15. $24x^2 - 7x - 6 = 0$
16. $20x^2 + 29x - 36 = 0$
17. $20x^2 + 3x - 9 = 0$
18. $54x^2 + 33x + 4 = 0$
19. $36x^2 - 19x - 7 = 0$
20. $8x^2 - 18x - 35 = 0$

Solving Quadratic Equations (E) Answers

Name: _____ Date: _____

Solve each equation for x.

1. $72x^2 + 113x + 36 = 0$
$(8x + 9)(9x + 4) = 0$
$x = -1\frac{1}{8}, -\frac{4}{9}$

2. $63x^2 - 76x + 21 = 0$
$(9x - 7)(7x - 3) = 0$
$x = \frac{7}{9}, \frac{3}{7}$

3. $12x^2 + 40x - 7 = 0$
$(2x + 7)(6x - 1) = 0$
$x = -3\frac{1}{2}, \frac{1}{6}$

4. $8x^2 - 22x - 63 = 0$
$(4x + 7)(2x - 9) = 0$
$x = -1\frac{3}{4}, 4\frac{1}{2}$

5. $42x^2 - 17x - 4 = 0$
$(7x - 4)(6x + 1) = 0$
$x = \frac{4}{7}, -\frac{1}{6}$

6. $45x^2 + 62x + 21 = 0$
$(5x + 3)(9x + 7) = 0$
$x = -\frac{3}{5}, -\frac{7}{9}$

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

8. $16x^2 - 40x + 25 = 0$
$(4x - 5)(4x - 5) = (4x - 5)^2 = 0$
$x = 1\frac{1}{4}$

9. $42x^2 - 41x + 5 = 0$
$(7x - 1)(6x - 5) = 0$
$x = \frac{1}{7}, \frac{5}{6}$

10. $15x^2 - 28x + 12 = 0$
$(5x - 6)(3x - 2) = 0$
$x = 1\frac{1}{5}, \frac{2}{3}$

11. $10x^2 + 21x - 10 = 0$
$(5x - 2)(2x + 5) = 0$
$x = \frac{2}{5}, -2\frac{1}{2}$

12. $54x^2 + 3x - 2 = 0$
$(9x + 2)(6x - 1) = 0$
$x = -\frac{2}{9}, \frac{1}{6}$

13. $10x^2 + 43x + 28 = 0$
$(2x + 7)(5x + 4) = 0$
$x = -3\frac{1}{2}, -\frac{4}{5}$

14. $10x^2 + 13x - 30 = 0$
$(2x + 5)(5x - 6) = 0$
$x = -2\frac{1}{2}, 1\frac{1}{5}$

15. $24x^2 - 7x - 6 = 0$
$(8x + 3)(3x - 2) = 0$
$x = -\frac{3}{8}, \frac{2}{3}$

16. $20x^2 + 29x - 36 = 0$
$(4x + 9)(5x - 4) = 0$
$x = -2\frac{1}{4}, \frac{4}{5}$

17. $20x^2 + 3x - 9 = 0$
$(4x + 3)(5x - 3) = 0$
$x = -\frac{3}{4}, \frac{3}{5}$

18. $54x^2 + 33x + 4 = 0$
$(6x + 1)(9x + 4) = 0$
$x = -\frac{1}{6}, -\frac{4}{9}$

19. $36x^2 - 19x - 7 = 0$
$(9x - 7)(4x + 1) = 0$
$x = \frac{7}{9}, -\frac{1}{4}$

20. $8x^2 - 18x - 35 = 0$
$(4x + 5)(2x - 7) = 0$
$x = -1\frac{1}{4}, 3\frac{1}{2}$