# Solving Quadratic Equations (J)

Name: _____ Date: _____

Solve each equation for x.

1. $30x^2 - 83x + 56 = 0$
2. $56x^2 + 27x - 5 = 0$
3. $12x^2 + 16x - 35 = 0$
4. $30x^2 + 31x + 5 = 0$
5. $35x^2 - 73x + 18 = 0$
6. $81x^2 - 54x - 7 = 0$
7. $18x^2 - 39x - 7 = 0$
8. $24x^2 + 67x + 45 = 0$
9. $45x^2 - 121x + 72 = 0$
10. $8x^2 + 81x + 81 = 0$
11. $42x^2 + 71x + 30 = 0$
12. $24x^2 - 13x - 7 = 0$
13. $8x^2 - 59x + 21 = 0$
14. $10x^2 - 21x - 10 = 0$
15. $32x^2 + 76x + 35 = 0$
16. $35x^2 - 81x + 40 = 0$
17. $63x^2 + 23x + 2 = 0$
18. $20x^2 + x - 12 = 0$
19. $24x^2 + 58x + 9 = 0$
20. $2x^2 + x - 6 = 0$

# Solving Quadratic Equations (J) Answers

Name: _____ Date: _____

Solve each equation for x.

1. $30x^2 - 83x + 56 = 0$
   $(6x - 7)(5x - 8) = 0$
   $x = 1\frac{1}{6}, 1\frac{3}{5}$

2. $56x^2 + 27x - 5 = 0$
   $(8x + 5)(7x - 1) = 0$
   $x = -\frac{5}{8}, \frac{1}{7}$

3. $12x^2 + 16x - 35 = 0$
   $(2x + 5)(6x - 7) = 0$
   $x = -2\frac{1}{2}, 1\frac{1}{6}$

4. $30x^2 + 31x + 5 = 0$
   $(6x + 5)(5x + 1) = 0$
   $x = -\frac{5}{6}, -\frac{1}{5}$

5. $35x^2 - 73x + 18 = 0$
   $(7x - 2)(5x - 9) = 0$
   $x = \frac{2}{7}, 1\frac{4}{5}$

6. $81x^2 - 54x - 7 = 0$
   $(9x + 1)(9x - 7) = 0$
   $x = -\frac{1}{9}, \frac{7}{9}$

7. $18x^2 - 39x - 7 = 0$
   $(3x - 7)(6x + 1) = 0$
   $x = 2\frac{1}{3}, -\frac{1}{6}$

8. $24x^2 + 67x + 45 = 0$
   $(8x + 9)(3x + 5) = 0$
   $x = -1\frac{1}{8}, -1\frac{2}{3}$

9. $45x^2 - 121x + 72 = 0$
   $(9x - 8)(5x - 9) = 0$
   $x = \frac{8}{9}, 1\frac{4}{5}$

10. $8x^2 + 81x + 81 = 0$
    $(x + 9)(8x + 9) = 0$
    $x = -9, -1\frac{1}{8}$

11. $42x^2 + 71x + 30 = 0$
    $(7x + 6)(6x + 5) = 0$
    $x = -\frac{6}{7}, -\frac{5}{6}$

12. $24x^2 - 13x - 7 = 0$
    $(8x - 7)(3x + 1) = 0$
    $x = \frac{7}{8}, -\frac{1}{3}$

13. $8x^2 - 59x + 21 = 0$
    $(x - 7)(8x - 3) = 0$
    $x = 7, \frac{3}{8}$

14. $10x^2 - 21x - 10 = 0$
    $(5x + 2)(2x - 5) = 0$
    $x = -\frac{2}{5}, 2\frac{1}{2}$

15. $32x^2 + 76x + 35 = 0$
    $(4x + 7)(8x + 5) = 0$
    $x = -1\frac{3}{4}, -\frac{5}{8}$

16. $35x^2 - 81x + 40 = 0$
    $(5x - 8)(7x - 5) = 0$
    $x = 1\frac{3}{5}, \frac{5}{7}$

17. $63x^2 + 23x + 2 = 0$
    $(9x + 2)(7x + 1) = 0$
    $x = -\frac{2}{9}, -\frac{1}{7}$

18. $20x^2 + x - 12 = 0$
    $(4x - 3)(5x + 4) = 0$
    $x = \frac{3}{4}, -\frac{4}{5}$

19. $24x^2 + 58x + 9 = 0$
    $(4x + 9)(6x + 1) = 0$
    $x = -2\frac{1}{4}, -\frac{1}{6}$

20. $2x^2 + x - 6 = 0$
    $(x + 2)(2x - 3) = 0$
    $x = -2, 1\frac{1}{2}$