

Solving Quadratic Equations (A)

Solve each equation for x

1. $12x^2 + 48x + 23 = -22$

7. $24x^2 - 14x = -2$

2. $5x^2 + 21x + 15 = -3$

8. $6x^2 - 23x + 1 = -19$

3. $12x^2 + 13x + 1 = -2$

9. $15x^2 + 51x + 9 = -9$

4. $28x^2 - 66x + 27 = -9$

10. $45x^2 - 69x + 6 = -12$

5. $16x^2 + 10x - 1 = 5$

11. $64x^2 - 32x - 2 = 19$

6. $4x^2 - 17x + 2 = -2$

12. $32x^2 + 52x + 5 = -10$

Solving Quadratic Equations (A) Answers

Solve each equation for x

1. $12x^2 + 48x + 23 = -22$
 $12x^2 + 48x + 45 = 0$
 $(2x + 5)(6x + 9) = 0$
 $x = -2 \frac{1}{2}, -1 \frac{1}{2}$

2. $5x^2 + 21x + 15 = -3$
 $5x^2 + 21x + 18 = 0$
 $(5x + 6)(x + 3) = 0$
 $x = -1 \frac{1}{5}, -3$

3. $12x^2 + 13x + 1 = -2$
 $12x^2 + 13x + 3 = 0$
 $(3x + 1)(4x + 3) = 0$
 $x = -\frac{1}{3}, -\frac{3}{4}$

4. $28x^2 - 66x + 27 = -9$
 $28x^2 - 66x + 36 = 0$
 $(7x - 6)(4x - 6) = 0$
 $x = \frac{6}{7}, 1 \frac{1}{2}$

5. $16x^2 + 10x - 1 = 5$
 $16x^2 + 10x - 6 = 0$
 $(8x - 3)(2x + 2) = 0$
 $x = \frac{3}{8}, -1$

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

7. $24x^2 - 14x = -2$
 $24x^2 - 14x + 2 = 0$
 $(8x - 2)(3x - 1) = 0$
 $x = \frac{1}{4}, \frac{1}{3}$

8. $6x^2 - 23x + 1 = -19$
 $6x^2 - 23x + 20 = 0$
 $(2x - 5)(3x - 4) = 0$
 $x = 2 \frac{1}{2}, 1 \frac{1}{3}$

9. $15x^2 + 51x + 9 = -9$
 $15x^2 + 51x + 18 = 0$
 $(5x + 2)(3x + 9) = 0$
 $x = -\frac{2}{5}, -3$

10. $45x^2 - 69x + 6 = -12$
 $45x^2 - 69x + 18 = 0$
 $(9x - 3)(5x - 6) = 0$
 $x = \frac{1}{3}, 1 \frac{1}{5}$

11. $64x^2 - 32x - 2 = 19$
 $64x^2 - 32x - 21 = 0$
 $(8x + 3)(8x - 7) = 0$
 $x = -\frac{3}{8}, \frac{7}{8}$

12. $32x^2 + 52x + 5 = -10$
 $32x^2 + 52x + 15 = 0$
 $(4x + 5)(8x + 3) = 0$
 $x = -1 \frac{1}{4}, -\frac{3}{8}$