Solving Quadratic Equations (J)

Solve each equation for x

1. $-4x^2 + 16x - 4 = 8$

2. $2x^2 + 3x + 1 = 0$

3. $-2x^2 - 3x + 19 = -16$

4. $4x^2 - 28x + 3 = -42$

5. $4x^2 + 28x + 5 = -43$

6. $-2x^2 - 11x - 3 = 2$

7. $4x^2 - 20x + 6 = -18$

8. $-2x^2 - 13x + 15 = -30$

9. $2x^2 - 9x + 7 = -2$

10. $4x^2 + 28x + 27 = -22$

11. $4x^2 + 16x + 8 = -4$

12. $x^2 - 13 = 51$

Solving Quadratic Equations (J) Answers

Solve each equation for x

1. $-4x^2 + 16x - 4 = 8$
   $-4x^2 + 16x - 12 = 0$
   $-(2x - 2)(2x - 6) = 0$
   $x = 1\ ,\ 3$

2. $2x^2 + 3x + 1 = 0$
   $2x^2 + 3x + 1 = 0$
   $(2x + 1)(x + 1) = 0$
   $x = -1/2,\ -1$

3. $-2x^2 - 3x + 19 = -16$
   $-2x^2 - 3x + 35 = 0$
   $(2x - 7)(x + 5) = 0$
   $x = 3\ 1/2,\ -5$

4. $4x^2 - 28x + 3 = -42$
   $4x^2 - 28x + 45 = 0$
   $(2x - 9)(2x - 5) = 0$
   $x = 4\ 1/2,\ 2\ 1/2$

5. $4x^2 + 28x + 5 = -43$
   $4x^2 + 28x + 48 = 0$
   $(2x + 6)(2x + 8) = 0$
   $x = -3\ ,\ -4$

6. $-2x^2 - 11x - 3 = 2$
   $-2x^2 - 11x - 5 = 0$
   $(2x + 1)(x + 5) = 0$
   $x = -1/2,\ -5$

7. $4x^2 - 20x + 6 = -18$
   $4x^2 - 20x + 24 = 0$
   $(2x - 6)(2x - 4) = 0$
   $x = 3\ ,\ 2$

8. $-2x^2 - 13x + 15 = -30$
   $-2x^2 - 13x + 45 = 0$
   $-(2x - 5)(x + 9) = 0$
   $x = 2\ 1/2,\ -9$

9. $2x^2 - 9x + 7 = -2$
   $2x^2 - 9x + 9 = 0$
   $(x - 3)(2x - 3) = 0$
   $x = 3\ ,\ 1\ 1/2$

10. $4x^2 + 28x + 27 = -22$
    $4x^2 + 28x + 49 = 0$
    $(2x + 7)(2x + 7) = 0$
    $x = -3\ 1/2$

11. $4x^2 + 16x + 8 = -4$
    $4x^2 + 16x + 12 = 0$
    $(2x + 2)(2x + 6) = 0$
    $x = -1\ ,\ -3$

12. $x^2 - 13 = 51$
    $x^2 - 64 = 0$
    $(x + 8)(x - 8) = 0$
    $x = -8\ ,\ 8$