Mixed Practice Solving Quadratic Equations

UNIT 7A: QUADRATIC EQUATIONS | PROBLEM SET 7A 08

Solve each equation by isolating the squared term.

[1] $12x^2 - 19 = 37 + 5x^2$

[2] $12 - 2(3x + 5)^2 = -60$

Solve each equation by setting factors equal to zero.

[3] $-12x(2x - 9) = 0$

[4] $(x + 8)(3x - 4) = 0$

Solve each equation by factoring then setting factors equal to zero.

[5] $x^2 - 14x + 24 = 0$

[6] $6x^2 + 11x + 3 = 0$

Solve each equation by completing the square.

[7] $x^2 + 6x = 5$

[8] $x^2 - 3x - 2 = 0$

[9] $3x^2 + 6x - 5 = 0$

[10] $2x^2 + 9x = 3$

Use the quadratic formula to solve each equation.

[11] $4x^2 - x = 5 + 2x$

[12] $\frac{1}{4}x^2 - \frac{2}{5}x - \frac{3}{10} = 0$

Solve each equation using any method.

[13] $2x(3x + 2) = 20 - 3x$

[14] $x^2 + 8x - 48 = 0$

[15] $2(x - 7)^2 = 36$

[16] $\frac{1}{2}x^2 + \frac{1}{3}x = \frac{1}{4}$