Solving Multi-Step Equations

Variables on Both Sides - Negative Coefficients

Name: _____ **Date:** _____

Solve the equations.

(1) $4x - 36 = 7x + 30$

(2) $7x - 121 = -3x + 79$

(3) $-9x - 71 = 25 - 15x$

(4) $-57 - 14x = 119 - 3x$

(5) $-4x - 215 = 109 + 8x$

(6) $-34 + 6x = 12 + 4x$

(7) $-11 + 6x = 16 + 5x$

(8) $-123 - 5x = 6x + 152$

(9) $-192 + 8x = 132 - 10x$

(10) $-191 - 12x = 154 + 3x$

(11) $2x - 211 = 65 + 14x$

(12) $-2x - 34 = 3x + 41$

Solving Multi-Step Equations

Variables on Both Sides - Negative Coefficients

A N S W E R K E Y

Solve the equations.

(1) $4x - 36 = 7x + 30$

$-36 - 3x = 30$

$-3x = 66$

$x = -22$

(2) $7x - 121 = -3x + 79$

$-121 + 10x = 79$

$10x = 200$

$x = 20$

(3) $-9x - 71 = 25 - 15x$

$-71 + 6x = 25$

$6x = 96$

$x = 16$

(4) $-57 - 14x = 119 - 3x$

$-57 - 11x = 119$

$-11x = 176$

$x = -16$

(5) $-4x - 215 = 109 + 8x$

$-215 - 12x = 109$

$-12x = 324$

$x = -27$

(6) $-34 + 6x = 12 + 4x$

$-34 + 2x = 12$

$2x = 46$

$x = 23$

(7) $-11 + 6x = 16 + 5x$

$-11 + x = 16$

$x = 27$

(8) $-123 - 5x = 6x + 152$

$-123 - 11x = 152$

$-11x = 275$

$x = -25$

(9) $-192 + 8x = 132 - 10x$

$-192 + 18x = 132$

$18x = 324$

$x = 18$

(10) $-191 - 12x = 154 + 3x$

$-191 - 15x = 154$

$-15x = 345$

$x = -23$

(11) $2x - 211 = 65 + 14x$

$-211 - 12x = 65$

$-12x = 276$

$x = -23$

(12) $-2x - 34 = 3x + 41$

$-34 - 5x = 41$

$-5x = 75$

$x = -15$