Solving Multi-Step Equations

Distributive With Parentheses - Negative Coefficients

Name: _____ **Date:** _____

Solve the equations.

(1) $7x + 6(x - 2) = -129$

(2) $-2x - 6(3x + 16) = 104$

(3) $5x + 4(-6x + 4) = 187$

(4) $-5x + 5(-x - 4) = 50$

(5) $2x + 2(-2x + 9) = 30$

(6) $6x + 6(-4x - 10) = 120$

(7) $7x - 5(-x - 10) = -34$

(8) $-5x - 3(-x + 17) = -61$

(9) $-4x - 7(-x - 5) = 17$

(10) $-4x - 6(-x - 9) = 34$

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A N S W E R K E Y

Solve the equations.

(1) $7x + 6(x - 2) = -129$

$7x + 6x - 12 = -129$
$13x - 12 = -129$
$13x = -117$
$x = -9$

(2) $-2x - 6(3x + 16) = 104$

$-2x - 18x - 96 = 104$
$-20x - 96 = 104$
$-20x = 200$
$x = -10$

(3) $5x + 4(-6x + 4) = 187$

$5x - 24x + 16 = 187$
$-19x + 16 = 187$
$-19x = 171$
$x = -9$

(4) $-5x + 5(-x - 4) = 50$

$-5x - 5x - 20 = 50$
$-10x - 20 = 50$
$-10x = 70$
$x = -7$

(5) $2x + 2(-2x + 9) = 30$

$2x - 4x + 18 = 30$
$-2x + 18 = 30$
$-2x = 12$
$x = -6$

(6) $6x + 6(-4x - 10) = 120$

$6x - 24x - 60 = 120$
$-18x - 60 = 120$
$-18x = 180$
$x = -10$

(7) $7x - 5(-x - 10) = -34$

$7x + 5x + 50 = -34$
$12x + 50 = -34$
$12x = -84$
$x = -7$

(8) $-5x - 3(-x + 17) = -61$

$-5x + 3x - 51 = -61$
$-2x - 51 = -61$
$-2x = -10$
$x = 5$

(9) $-4x - 7(-x - 5) = 17$

$-4x + 7x + 35 = 17$
$3x + 35 = 17$
$3x = -18$
$x = -6$

(10) $-4x - 6(-x - 9) = 34$

$-4x + 6x + 54 = 34$
$2x + 54 = 34$
$2x = -20$
$x = -10$