

Solving Multi-Step Equations

Distributive With Parentheses - Negative Coefficients

Name: _____ Date: _____



Solve the equations.

(1) $-3x + 6(x + 4) = -6$

(2) $-2x - 2(2x + 2) = -46$

(3) $-4x + 5(2x - 2) = -46$

(4) $2x - 3(3x + 4) = -47$

(5) $-7x + 6(x - 2) = -23$

(6) $-2x - 6(-2x - 3) = -42$

(7) $7x - 3(3x - 2) = 26$

(8) $-7x + 2(3x + 3) = 15$

(9) $4x - 3(x + 2) = 3$

(10) $5x + 4(-x - 4) = -7$

Solving Multi-Step Equations

Distributive With Parentheses - Negative Coefficients

ANSWER KEY



Solve the equations.

$$\begin{aligned}(1) \quad -3x + 6(x + 4) &= -6 \\ -3x + 6x + 24 &= -6 \\ 3x + 24 &= -6 \\ 3x &= -30 \\ x &= -10\end{aligned}$$

$$\begin{aligned}(2) \quad -2x - 2(2x + 2) &= -46 \\ -2x - 4x - 4 &= -46 \\ -6x - 4 &= -46 \\ -6x &= -42 \\ x &= 7\end{aligned}$$

$$\begin{aligned}(3) \quad -4x + 5(2x - 2) &= -46 \\ -4x + 10x - 10 &= -46 \\ 6x - 10 &= -46 \\ 6x &= -36 \\ x &= -6\end{aligned}$$

$$\begin{aligned}(4) \quad 2x - 3(3x + 4) &= -47 \\ 2x - 9x - 12 &= -47 \\ -7x - 12 &= -47 \\ -7x &= -35 \\ x &= 5\end{aligned}$$

$$\begin{aligned}(5) \quad -7x + 6(x - 2) &= -23 \\ -7x + 6x - 12 &= -23 \\ -x - 12 &= -23 \\ -x &= -11 \\ x &= 11\end{aligned}$$

$$\begin{aligned}(6) \quad -2x - 6(-2x - 3) &= -42 \\ -2x + 12x + 18 &= -42 \\ 10x + 18 &= -42 \\ 10x &= -60 \\ x &= -6\end{aligned}$$

$$\begin{aligned}(7) \quad 7x - 3(3x - 2) &= 26 \\ 7x - 9x + 6 &= 26 \\ -2x + 6 &= 26 \\ -2x &= 20 \\ x &= -10\end{aligned}$$

$$\begin{aligned}(8) \quad -7x + 2(3x + 3) &= 15 \\ -7x + 6x + 6 &= 15 \\ -x + 6 &= 15 \\ -x &= 9 \\ x &= -9\end{aligned}$$

$$\begin{aligned}(9) \quad 4x - 3(x + 2) &= 3 \\ 4x - 3x - 6 &= 3 \\ x - 6 &= 3 \\ x &= 9 \\ x &= 9\end{aligned}$$

$$\begin{aligned}(10) \quad 5x + 4(-x - 4) &= -7 \\ 5x - 4x - 16 &= -7 \\ x - 16 &= -7 \\ x &= 9 \\ x &= 9\end{aligned}$$