

Solving Multi-Step Equations

Variables on Both Sides - No Negative Coefficients

Name: _____ Date: _____



Solve the equations.

(1) $-54 + 6x = -3x + 36$

(2) $3x - 22 = 13 - 2x$

(3) $6x - 72 = -x + 26$

(4) $-22 + x = 32 - 5x$

(5) $-15 - x = 9 - 3x$

(6) $-15 + 6x = 18 + 3x$

(7) $3x - 19 = -2x + 16$

(8) $-45 + 5x = 15 + x$

(9) $-46 + 2x = 14 - 3x$

(10) $-23 - 3x = -6x + 22$

(11) $5x - 5 = 3x + 9$

(12) $5x - 9 = 18 + 2x$

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ANSWER KEY



Solve the equations.

$$\begin{aligned}(1) \quad -54 + 6x &= -3x + 36 \\ -54 + 9x &= 36 \\ 9x &= 90 \\ x &= 10\end{aligned}$$

$$\begin{aligned}(2) \quad 3x - 22 &= 13 - 2x \\ -22 + 5x &= 13 \\ 5x &= 35 \\ x &= 7\end{aligned}$$

$$\begin{aligned}(3) \quad 6x - 72 &= -x + 26 \\ -72 + 7x &= 26 \\ 7x &= 98 \\ x &= 14\end{aligned}$$

$$\begin{aligned}(4) \quad -22 + x &= 32 - 5x \\ -22 + 6x &= 32 \\ 6x &= 54 \\ x &= 9\end{aligned}$$

$$\begin{aligned}(5) \quad -15 - x &= 9 - 3x \\ -15 + 2x &= 9 \\ 2x &= 24 \\ x &= 12\end{aligned}$$

$$\begin{aligned}(6) \quad -15 + 6x &= 18 + 3x \\ -15 + 3x &= 18 \\ 3x &= 33 \\ x &= 11\end{aligned}$$

$$\begin{aligned}(7) \quad 3x - 19 &= -2x + 16 \\ -19 + 5x &= 16 \\ 5x &= 35 \\ x &= 7\end{aligned}$$

$$\begin{aligned}(8) \quad -45 + 5x &= 15 + x \\ -45 + 4x &= 15 \\ 4x &= 60 \\ x &= 15\end{aligned}$$

$$\begin{aligned}(9) \quad -46 + 2x &= 14 - 3x \\ -46 + 5x &= 14 \\ 5x &= 60 \\ x &= 12\end{aligned}$$

$$\begin{aligned}(10) \quad -23 - 3x &= -6x + 22 \\ -23 + 3x &= 22 \\ 3x &= 45 \\ x &= 15\end{aligned}$$

$$\begin{aligned}(11) \quad 5x - 5 &= 3x + 9 \\ -5 + 2x &= 9 \\ 2x &= 14 \\ x &= 7\end{aligned}$$

$$\begin{aligned}(12) \quad 5x - 9 &= 18 + 2x \\ -9 + 3x &= 18 \\ 3x &= 27 \\ x &= 9\end{aligned}$$