

Solving Multi-Step Equations

Distributive With Parentheses - No Negative Coefficients

Name: _____ Date: _____



Solve the equations.

(1) $3x + 7(2x - 10) = 100$

(2) $5x + 5(x - 20) = -50$

(3) $4x + 2(2x - 15) = 66$

(4) $6x + 4(x + 4) = 66$

(5) $3x + 2(3x - 7) = 94$

(6) $6x + 2(2x + 13) = 86$

(7) $4x + 2(6x + 16) = 208$

(8) $6x + 2(x + 6) = 76$

(9) $2x + 3(7x - 4) = 195$

(10) $6x + 2(6x - 13) = 136$

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ANSWER KEY



Solve the equations.

$$\begin{aligned}(1) \quad 3x + 7(2x - 10) &= 100 \\ 3x + 14x - 70 &= 100 \\ 17x - 70 &= 100 \\ 17x &= 170 \\ x &= 10\end{aligned}$$

$$\begin{aligned}(2) \quad 5x + 5(x - 20) &= -50 \\ 5x + 5x - 100 &= -50 \\ 10x - 100 &= -50 \\ 10x &= 50 \\ x &= 5\end{aligned}$$

$$\begin{aligned}(3) \quad 4x + 2(2x - 15) &= 66 \\ 4x + 4x - 30 &= 66 \\ 8x - 30 &= 66 \\ 8x &= 96 \\ x &= 12\end{aligned}$$

$$\begin{aligned}(4) \quad 6x + 4(x + 4) &= 66 \\ 6x + 4x + 16 &= 66 \\ 10x + 16 &= 66 \\ 10x &= 50 \\ x &= 5\end{aligned}$$

$$\begin{aligned}(5) \quad 3x + 2(3x - 7) &= 94 \\ 3x + 6x - 14 &= 94 \\ 9x - 14 &= 94 \\ 9x &= 108 \\ x &= 12\end{aligned}$$

$$\begin{aligned}(6) \quad 6x + 2(2x + 13) &= 86 \\ 6x + 4x + 26 &= 86 \\ 10x + 26 &= 86 \\ 10x &= 60 \\ x &= 6\end{aligned}$$

$$\begin{aligned}(7) \quad 4x + 2(6x + 16) &= 208 \\ 4x + 12x + 32 &= 208 \\ 16x + 32 &= 208 \\ 16x &= 176 \\ x &= 11\end{aligned}$$

$$\begin{aligned}(8) \quad 6x + 2(x + 6) &= 76 \\ 6x + 2x + 12 &= 76 \\ 8x + 12 &= 76 \\ 8x &= 64 \\ x &= 8\end{aligned}$$

$$\begin{aligned}(9) \quad 2x + 3(7x - 4) &= 195 \\ 2x + 21x - 12 &= 195 \\ 23x - 12 &= 195 \\ 23x &= 207 \\ x &= 9\end{aligned}$$

$$\begin{aligned}(10) \quad 6x + 2(6x - 13) &= 136 \\ 6x + 12x - 26 &= 136 \\ 18x - 26 &= 136 \\ 18x &= 162 \\ x &= 9\end{aligned}$$