

Solving Equations Answer Document

Partner A: Key

Solve the Equation	Check Your Answer	Solution
<p>1</p> $\frac{3}{1} \cdot \frac{x}{3} = 4 \cdot 3$ $x = 12$	$\frac{12}{3} = 4$ $4 = 4 \checkmark$	$x = 4$
<p>2</p> $-x + 4 = -6$ <p>Put 2 w Neg.</p> $\begin{array}{r} -x + 4 = -6 \\ -4 \quad -4 \\ \hline -x = -10 \\ -1 \quad -1 \\ \hline x = 10 \end{array}$	$-10 + 4 = -6$ $-6 = -6 \checkmark$	$x = 10$
<p>3</p> $20 = 9 - 3x - 10$ <p>combine</p> $\begin{array}{r} 20 = 9 - 3x - 10 \\ 20 = -1 - 3x \\ +1 \quad +1 \\ \hline 21 = -3x \\ -3 \quad -3 \\ \hline -7 = x \end{array}$	$20 = 9 - 3(-7) - 10$ $20 = 9 + 21 - 10$ $20 = 20 \checkmark$	$x = -7$
<p>4</p> $8(1 + 5x) = 208$ $\begin{array}{r} 8 + 40x = 208 \\ -8 \quad -8 \\ \hline 40x = 200 \\ \frac{40x}{40} = \frac{200}{40} \\ x = 5 \end{array}$	$8(1 + 5(5)) = 208$ $8(1 + 25) = 208$ $8 + 200 = 208$ $208 = 208 \checkmark$	$x = 5$
<p>5</p> $-8(x + 7) = -120$ $\begin{array}{r} -8x - 56 = -120 \\ +56 \quad +56 \\ \hline -8x = -64 \\ \frac{-8x}{-8} = \frac{-64}{-8} \\ x = 8 \end{array}$	$-8(8 + 7) = -120$ $-8(15) = -120$ $-120 = -120 \checkmark$	$x = 8$

<p>6</p> $305 = 8(6x + 3) - 7$ $305 = 48x + 24 - 7$ $305 = 48x + 17$ $\begin{array}{r} -17 \\ \hline 288 = 48x \\ 48 \quad 48 \\ 6 = x \end{array}$	$305 = 8(6(6) + 3) - 7$ $305 = 8(39) - 7$ $305 = 312 - 7$ $305 = 305 \checkmark$	$x = 6$
<p>7</p> $x - 8 = -8(6x + 1)$ $x - 8 = -48x - 8$ $\begin{array}{r} -x \\ \hline -8 = -49x - 8 \\ +8 \quad +8 \\ 0 = -49x \\ -49 \quad -49 \\ 0 = x \end{array}$	$0 - 8 = -8(6(6) + 1)$ $0 - 8 = -8(37)$ $-8 = -8(1)$ $-8 = -8 \checkmark$	$x = 0$
<p>8</p> $6 - 7(3x + 7) = 125$ $6 - 21x - 49 = 125$ $\begin{array}{r} -21x - 43 = 125 \\ +43 \quad +43 \\ \hline -21x = 168 \\ -21 \quad -21 \\ x = -8 \end{array}$	$6 - 7(3(-8) + 7) = 125$ $6 - 7(-24 + 7) = 125$ $6 - 7(-17) = 125$ $6 + 119 = 125$ $125 = 125 \checkmark$	$x = -8$
<p>9</p> $\cancel{3} \frac{x+11}{\cancel{3}} = 4 \cdot 3$ $\begin{array}{r} x+11 = 12 \\ -11 \quad -11 \\ \hline x = 1 \end{array}$	$\frac{1+11}{3} = 4$ $\frac{12}{3} = 4$ $4 = 4 \checkmark$	$x = 1$
<p>10</p> $\frac{x-12}{2} + 1 = -3$ $\cancel{2} \cdot \frac{x-12}{\cancel{2}} = -4 \cdot 2$ $\begin{array}{r} x-12 = -8 \\ +12 \quad +12 \\ \hline x = 4 \end{array}$	$\frac{4-12}{2} + 1 = -3$ $\frac{-8}{2} + 1 = -3$ $-4 + 1 = -3$ $-3 = -3 \checkmark$	$x = 4$