

Using the Distributive Property

Simplify each expression.

1) $-6(a + 8)$

$-6a - 48$

2) $4(1 + 9x)$

$4 + 36x$

3) $6(-5n + 7)$

$-30n + 42$

4) $(9m + 10) \cdot 2$

$18m + 20$

5) $(-4 - 3n) \cdot -8$

$32 + 24n$

6) $8(-b - 4)$

$-8b - 32$

7) $(1 - 7n) \cdot 5$

$5 - 35n$

8) $-6(x + 4)$

$-6x - 24$

9) $5(3m - 6)$

$15m - 30$

10) $(-6p + 7) \cdot -4$

$24p - 28$

11) $5(b - 1)$

$5b - 5$

12) $(x + 9) \cdot 5$

$5x + 45$

Solving Equations Review
Find and Fix the Mistakes

Problem and Incorrect Solution	Explanation of Errors Made (some have more than one mistake)	Correct Solution (show all work)
$ \begin{array}{r} -2(8m + 8) = -16 \\ -16m + 16 = -16 \\ \quad -16 \quad -16 \\ \hline -16m \quad = -32 \\ \frac{-16m}{16} \quad = \frac{-32}{16} \\ m \quad = -2 \end{array} $	<ul style="list-style-type: none"> • $-2(8) = -16$ • Did not divide both sides by -16 	$m = 0$
$ \begin{array}{r} 5(1 + 4h) + 2h = 27 \\ 5 + 20h + 2h = 27 \\ \quad 27h = 27 \\ \quad \frac{27h}{27} = \frac{27}{27} \\ \quad h = 1 \end{array} $	<p>Combined unlike terms</p>	$h = 1$ <p>(still get same answer!)</p>
$ \begin{array}{r} -2(x - 8) + 4x = -12 \\ -2x - 16 + 4x = -12 \\ -2x - 16 + 4x = -12 \\ \quad -2x - 16 = -12 \\ \quad \quad +16 \quad +16 \\ \hline -2x \quad = 4 \\ \frac{-2x}{2} \quad = \frac{4}{2} \\ x \quad = 2 \end{array} $	<ul style="list-style-type: none"> • $-2(-8) = +16$ • $-2x + 4x = +2x$ • Did not divide by -2 	$x = -14$

Let's Practice Solving Integers!

Practice, Practice, Practice

Name _____

Period _____

-1	3	→ 2
4	-7	→ -3

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<u>3</u>	<u>-4</u>	→ $\begin{array}{ c } \hline -1 \\ \hline \end{array}$
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13	-2	11
-3	5	2

<u>10</u>	<u>3</u>	$\begin{array}{ c } \hline 13 \\ \hline \end{array}$
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10	-11	-1
8	-10	-2

<u>18</u>	<u>-21</u>	$\begin{array}{ c } \hline -3 \\ \hline \end{array}$
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-7	-3	-10
-4	-9	-13

<u>-11</u>	<u>-12</u>	$\begin{array}{ c } \hline -23 \\ \hline \end{array}$
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49	-81	-32
-15	10	-5

<u>+34</u>	<u>-71</u>	$\begin{array}{ c } \hline -37 \\ \hline \end{array}$
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17	-47	-30
-63	-8	-71

<u>-46</u>	<u>-55</u>	$\begin{array}{ c } \hline -101 \\ \hline \end{array}$
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5x	2x	7x
-3x	-9x	-12x

<u>2x</u>	<u>-7x</u>	$\begin{array}{ c } \hline -5x \\ \hline \end{array}$
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-4x	8x	4x
10x	-7x	3x

<u>6x</u>	<u>x</u>	$\begin{array}{ c } \hline -7x \\ \hline \end{array}$
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Solving EquationsDirections: Please **show all your work** by showing all your steps.

1. $8 \cdot \frac{v}{8} = 2 \cdot 8$

$$\boxed{v=16}$$

Describe what you did after each step

Given

multiply both sides by 8
Solve

2. $5a + 11 = 12$

$$\begin{array}{r} -11 \quad -11 \\ \hline 5a = 1 \\ \frac{5}{5} \quad \frac{5}{5} \\ \hline \boxed{a = \frac{1}{5}} \end{array}$$

Given

subtract 11
divide 5
Solve

3. $-2(6p - 7) = 4 - 9p$

$$\begin{array}{r} -2p + 14 = 4 - 9p \\ +9p \quad +9p \\ \hline -3p + 14 = 4 \\ -14 \quad -14 \\ \hline -3p = -10 \\ \frac{-3p}{-3} = \frac{-10}{-3} \end{array}$$

$$p = \frac{10}{3} \text{ or } 3\frac{1}{3}$$

Given

Distribute -2
Add 9p
Subtract 14
Divide -3
Solve

5. $\frac{1}{2}(26 - 14y) + 2y = -4(8 + y) - 10 + 4y$

$$\begin{array}{r} 13 - 7y + 2y = -32 - 4y - 10 + 4y \\ 13 - 5y = -42 + 0y \\ -13 \quad -13 \\ \hline -5y = -55 \\ \frac{-5y}{-5} = \frac{-55}{-5} \end{array}$$

$$\boxed{y=11}$$

Given

Distribute $\frac{1}{2}$ and -4
Combine Like Terms
Subtract 13
Divide -5
Solve