

## Math 8

Our Goal: To learn to solve multi-step equations

Warm Up: You will need your homework, notebook, and computer  
Everything else, bags etc. on the shelves please

Today's Homework

1.2 Exercises, p.14-15: 2-18 (evens)

Previous Homework

1.1 Exercises, p.7-9: 2-36 (evens)

$$\begin{array}{r} \cancel{3} \pi d \\ \hline \cancel{3} \pi \\ d \end{array} + \begin{array}{r} 12 \pi \\ \hline 3 \pi \\ \frac{12}{3} = 4 \end{array}$$

$d = 4$  ←

$$\frac{12R}{2R} = 6$$

Simplify the expression.

1)  $2n + 5 + 3n$

2)  $x - 7 - 4x$

$-7 - 3x$

3)  $4f + f + 6f$

4)  $(9 - m) + 4m + 7$

5)  $17 + 2t - 9 + 2t$

$8 + 4t$

6)  $(y + 7) + (2y - 5)$

$$(9 - m) + 4m + 7$$

$$\underline{\underline{9}} - \underline{\underline{m}} + \underline{\underline{4m}} + \underline{\underline{7}}$$

$$= 3m + 16$$

$$= 16 + 3m$$

 **Key Idea****Solving Multi-Step Equations**

To solve multi-step equations, use inverse operations to isolate the variable.

The height (in feet) of a tree after  $x$  years is  $1.5x + 15$ .  
After how many years is the tree 24 feet tall?

Solve  $8x - 6x - 25 = -35$ .

$$8x - 6x - 25 = -35$$

$$\begin{array}{r} 2x - 25 = -35 \\ + 25 \quad + 25 \\ \hline 2x = -10 \end{array}$$

$$\begin{array}{r} -10 \\ \hline 2 \end{array} x = -5$$

Solve  $2(1 - 5x) + 4 = -8$ .

$$2(1 - 5x) + 4 = -8$$

$$2 - 10x + 4 = -8$$

$$\begin{array}{r} \cancel{2} - 10x = -8 \\ \underline{\phantom{2} - 6} \\ 0 - 10x = -14 \\ \phantom{0} \div 10 \phantom{=} \phantom{-} \phantom{14} \phantom{=} \phantom{-} \phantom{14} \\ \phantom{0} \phantom{\div} \phantom{10} \phantom{=} \phantom{-} \phantom{14} \phantom{=} \phantom{-} \phantom{14} \end{array}$$

$$\begin{aligned} x &= \frac{14}{10} = \frac{7}{5} \\ &= 1\frac{2}{5} = 1.4 \end{aligned}$$

Use the table to find the number of miles  $x$  you need to run on Friday so that the mean number of miles run per day is 1.5.

<b>Day</b>	<b>Miles</b>
Monday	2
Tuesday	0
Wednesday	1.5
Thursday	0
Friday	$x$



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