

## 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)

Show that  $X = 3$   
is a solution

to  $2x - 5 = 1$

$$2 \cdot 3 - 5 = 1$$

$$6 - 5 = 1$$

$$1 = 1$$

Simplify the expression.

1)  $2n + 5 + 3n$

~~$2n + 5$~~   $5n + 5$

2)  $x - 7 - 4x$

$-3x - 7$

3)  $4f + f + 6f$

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

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

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

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

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

$$\frac{2x}{2} = \frac{-10}{2}$$

$$x = -5$$

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

$$\underline{2} - 10x + \underline{4} = -8$$

$$-6 - 10x = -8$$

$$\frac{-10x}{-10} = \frac{-14}{-10}$$

$$x = \frac{14}{10} = \frac{7}{5}$$

$$= 1\frac{2}{5}$$

$$= 1.4$$

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.     

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

~~S.~~

$$\frac{x + 2 + 1.5}{5} = 1.5$$

$$x + 2 + 1.5 = 7.5$$

$$\begin{array}{r} x + 3.5 = 7.5 \\ - 3.5 \quad - 3.5 \\ \hline \end{array}$$

$$x = 4$$