

guided notes

NAME _____

DATE _____

Module 3 Solving Linear Equations of One Variable
Lesson 3 Solving One-Step Linear Equations

Lesson Objectives

- Solve one-step equations using addition and subtraction.
- Solve one-step equations using multiplication and division.
- Check one-step equations using addition, subtraction, multiplication, and division.

Example: $3b = 6.75$

$$\frac{3b}{3} = \frac{6.75}{3}$$

$$b = \underline{\hspace{2cm}}$$

Check: $3b = 6.75$

$$3(\underline{\hspace{2cm}}) \stackrel{?}{=} 6.75$$

$$6.75 = 6.75 \checkmark$$

The solution is _____.

Suppose we have an equation in which some coefficient times a variable equals another number. To solve the equation, _____ both sides of the equation by that _____.

Division and multiplication are _____ operations.

Division undoes the _____ operation.

1 $5x = 65$

$$\frac{5x}{5} = \frac{65}{5}$$

$$x = \underline{\hspace{2cm}}$$

Check: $5x = 65$

$$\underline{\hspace{2cm}} \stackrel{?}{=} \underline{\hspace{2cm}}$$

$$65 = 65 \checkmark$$

The solution is _____.

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Example: $\frac{g}{8} = 15$

$$8 \cdot \frac{g}{8} = 8 \cdot 15$$

$$g = \underline{\hspace{2cm}}$$

Check: $\frac{g}{8} = 15$

$$\underline{\hspace{2cm}} \stackrel{?}{=} \underline{\hspace{2cm}}$$

$$15 = 15 \checkmark$$

The solution is $\underline{\hspace{2cm}}$.

2

$$\frac{z}{4} = 3$$

$$\underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$z = 12$$

Check: $\frac{z}{4} = 3$

$$\underline{\hspace{2cm}} \stackrel{?}{=} \underline{\hspace{2cm}}$$

$$3 = 3 \checkmark$$

The solution is $\underline{\hspace{2cm}}$.

To undo subtraction we use the inverse operation $\underline{\hspace{2cm}}$.

Example: $m - 20 = 55$

$$m - 20 + 20 = 55 + 20$$

$$m = \underline{\hspace{2cm}}$$

Check: $m - 20 = 55$

$$75 - 20 \stackrel{?}{=} \underline{\hspace{2cm}}$$

$$55 = 55 \checkmark$$

The solution is $\underline{\hspace{2cm}}$.

3

$$y - 5 = 12$$

$$y - 5 + \underline{\hspace{2cm}} = 12 + \underline{\hspace{2cm}}$$

$$y = \underline{\hspace{2cm}}$$

Check: $y - 5 = 12$

$$\underline{\hspace{2cm}} \stackrel{?}{=} \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} = 12 \checkmark$$

The solution is $\underline{\hspace{2cm}}$.

Example: $P + 75 = 120$

$$\underline{\hspace{2cm}} = 120 - 75$$

$$\underline{\hspace{2cm}} = 45$$

Check: $P + 75 = 120$

$$\underline{\hspace{2cm}} \stackrel{?}{=} \underline{\hspace{2cm}}$$

$$120 = 120 \checkmark$$

The solution is $\underline{\hspace{2cm}}$.

4

$$t + 7 = 9$$

$$t + 7 - 7 = \underline{\hspace{2cm}}$$

$$t = \underline{\hspace{2cm}}$$

Check: $\underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

$$2 + 7 \stackrel{?}{=} 9$$

$$\underline{\hspace{2cm}} = \underline{\hspace{2cm}} \checkmark$$

The solution is $\underline{\hspace{2cm}}$.