Lesson 3-3 and 3-4: Solving Equations (Part 2)

Can you figure out what value the variable represents in each equation?

$$2b+5=13 \frac{c}{4}-2=3 3x-8=13 \frac{y}{2}+4=10$$

To solve these equations and other more difficult equations, it will be important that we use our **inverse operations** to get the variable by itself on one side of the equation.

Take a look at this example:

$$2b+5 = 13$$

$$-5 = 8$$

Check:
$$2b+5 = 13$$
 $2()+5 = 13$
 $+5 = 13$
 $= 13$

Checklist:

- 1. _____
- 2. _____
- 3.

Let's Try This One Together!

Example 1 Solve Equations with Two Operations

You received \$86 in all selling paintings. You sold one painting for \$29 and the rest for \$19 each. Solve the equation below to find x, the number of \$19 paintings you sold.

$$19x + 29 = 86$$

Check:

Got It?

Solve each equation. Show your steps.

1.
$$2x + 15 = 79$$

2.
$$4x + 22 = 86$$

1. $2x+15=79$	Check:	2. $4x + 22 = 86$	Check:

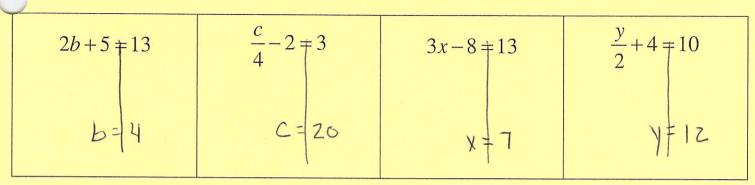
Intro Can I Solve Equations with Division and Subtraction?

Let's Take a Look at a few with Division:

1. $\frac{x}{3} - 7 = 4$	Check:	$\frac{x}{6} - 3 = 5$	Check:

Lesson 3-3 and 3-4: Solving Equations (Part 2)

Can you figure out what value the variable represents in each equation?



To solve these equations and other more difficult equations, it will be important that we use our **inverse operations** to get the variable by itself on one side of the equation.

Take a look at this example:

$$2b+5 = 13$$
 -5
 -5
 $2b = 8$
 -2
 -2
 -2

Check:
$$2b+5=13$$

 $2(4)+5=13$
 $8+5=13$
 $13=13$

Checklist:

- 1. Undo addition
 and Subtraction
- 2. Undo & multiplication and division
- 3. Check

Let's Try This One Together!

Example 1 Solve Equations with Two Operations

You received \$86 in all selling paintings. You sold one painting for \$29 and the rest for \$19 each. Solve the equation below to find x, the number of \$19 paintings you sold.

$$19x + 29 = 86$$
 $-29 - 29$
 $19x = 57$
 $= 19$
 $= 19$
 $= 19$

Check:

$$19 \times + 29 = 86$$

$$19(3) + 29 = 86$$

$$57 + 29 = 86$$

$$86 = 86$$

Got It?

Solve each equation. Show your steps.

1.
$$2x + 15 = 79$$

$$2.4x + 22 = 86$$

1.
$$2x+15=79$$
 Check: $2x+15=79$ 2. $4x+22=86$ Check: $4x+2z=86$ $2x=64$ $2(3z)+15=79$ $2x=3z$ $2x=3z$

Intro Can I Solve Equations with Division and Subtraction?

Let's Take a Look at a few with Division:

1.
$$\frac{x}{3} - 7 = 4$$
 Check:
 $\frac{x}{3} - 7 = 4$ Check:
 $\frac{x}{6} - 3 = 5$ Check:
 $\frac{x}{6} - 3 =$