Algebra 1 Semester 1
Lesson: <mark>April 6th</mark>

Learning Target:
Students will solve LITERAL equations.

Let's Get Started:
Watch each video.
Solve Literal Equations Video 1
Solve Literal Equations Video 2
Solve Literal Equations Video 3

BELL WORK 04/06

Solve each equation for x:

Do-Now

$3x + 6 = 4(x - 2) + 11$	$2(x + 3) - 6 = 5x + 1$
$\frac{2}{3}(x - 6) + 1 = 5$	$-\frac{3}{2}(x + 4) - 3 = 7$

BELL WORK 04/06 → ANSWER KEY

Solve each equation for x:

Do-Now

$3x + 6 = 4(x - 2) + 11$ **x = 3**	$2(x + 3) - 6 = 5x + 1$ **x = -1/3**
$\frac{2}{3}(x - 6) + 1 = 5$ **x = 12**	$-\frac{3}{2}(x + 4) - 3 = 7$ **x = -32/3**

Definition

Literal Equation – an equation with two or more variables.

You can "rewrite" a literal equation to isolate any one of the variables using inverse operations. This is called *solving for a variable*.

Solving for a Variable

Step 1 Locate the variable you are asked to solve for in the equation.

Step 2 Identify the operations on this variable and the order in which they are applied.

Step 3 Use inverse operations to undo operations and isolate the variable.

2) Solve $2x - 4y = 7$ for y

D	U
$\cdot -4$	$-2x$
$+2x$	$\div -4$

1. Draw "the river"

2. Subtract 2x from both sides

3. Simplify

4. Divide both sides by -4

5. Does it simplify? Nope!

$$-2x \qquad -2x$$

$$-4y = 7 - 2x$$

$$\frac{-4y}{-4} \qquad \frac{7 - 2x}{-4}$$

$$y = \frac{7 - 2x}{-4}$$

3) The formula for the volume of a rectangular prism is V = LWH. Which equation solves the formula for L?

1. $L = V - WH$

2. $L = \dfrac{VH}{W}$

3. $L = \dfrac{VW}{H}$

✔ 4. $L = \dfrac{V}{HW}$

4) The formula for the volume of a pyramid is $V = \dfrac{1}{3}bh$. Which equation solves the formula for h?

1. $h = 3Vb$

2. $h = \dfrac{3b}{V}$

✔ 3. $h = \dfrac{3V}{b}$

4. $h = \dfrac{V}{3b}$

Practice 1 - On a sheet of paper, solve for the indicated variable.

i. $P = \dfrac{F}{A}$ solve for A

ii. $2x + 3y = 6$ solve for y

iii. $V = \dfrac{1}{3} lwh$ solve for l

iv. $A = \dfrac{1}{2} bh$ solve for b

v. $P = 2l + 2w$ solve for l

vi. $V = lwh$ solve for w

vii. $P = 2l + 2w$ solve for w

viii. $S = L + 2B$ solve for B

Practice 1 - On a sheet of paper, solve for the indicated variable.

Answer Key

i. $A = \dfrac{F}{P}$

ii. $y = -\dfrac{2}{3}x + 2$

iii. $l = \dfrac{3V}{wh}$

iv. $b = \dfrac{2A}{h}$

v. $l = \dfrac{P}{2} - w$

vi. $w = \dfrac{V}{lh}$

vii. $w = \dfrac{P}{2} - l$

viii. $B = \dfrac{S-L}{2}$

Practice 2

Solve literal equations - 12 questions. Enter your first name or initials when prompted. On the login screen click "Skip for Now" as you do not need to log in to complete the practice.

[Click Link](#)

Exit Pass

3 things you learned today

2 things you want to learn about

1 question you have