

4th grade

Ch 8.1

Solving expressions with variables

AF 1.1

Objective:

■ We will solve expressions with variable

What are we going to do today?

▣ Order of Operations –

▣ Rules to simplify expressions!!!

Parentheses

Exponents

Multiply

Divide

Add

Subtract

In your own words, what is the order of operations?

▣ Order of Operations – rules that tell us which order to go!!!

NOTE

When we have multiplication and division in the same equation....go from **left to right!!!!**

Ex: $16 \div 2 \times 8 + 5$

When we have adding and subtracting in the same equations....go from **left to right!**

Ex: $3 + 4 - 10 \times 5$

APK

☐ Simplify the expressions:

☐ $(16 - 15) \times (13 + 2)$

☐ $38 - 4 \times (3 + 5)$

Concept Development

- Variable – is a LETTER or SYMBOL that is used to stand for an unknown number.

Example: $(y + 2) \times 10$

$50 - (6 \times y)$

CFU: R-A-J

What is a variable?

Concept Development

RAJ

■ Which one of these expressions has a variable?

■ A. $(y+2) \times 10$

■ B. $5 + 4$

■ How did you know that was the correct answer?

Pair share

Pick non volunteer

Show me with your white board

Importance

- ▣ By knowing how to solve expressions you will be able to:
 - ▣ 1. find the answer
 - ▣ 2. know how to find higher level questions.
 - ▣ 3. will be able to pass the test
 - ▣ 4. Do well on CST.

- ▣ Why is this important to you?
 - ▣ Pair share
 - ▣ Ask for volunteers

CST
Release
question



Skill Development

I do:

Steps:

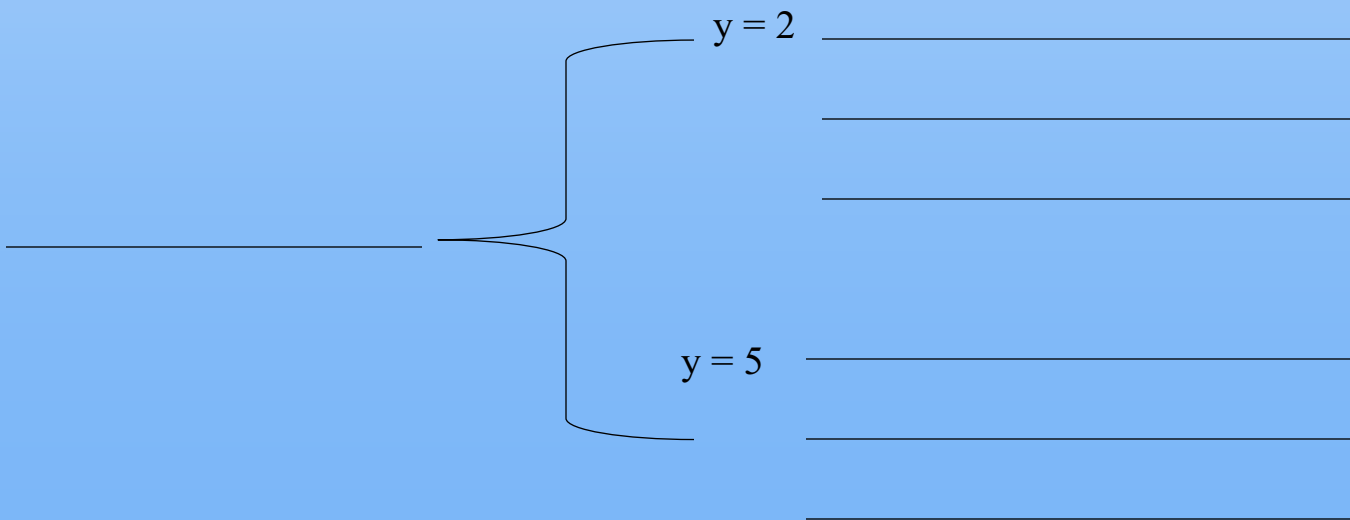
#1: Write the problem down

#2: Replace the variable with the number

#3: Use the order of operations to solve the problem

▣ Using a brace map we will evaluate the expressions:

Expression	Value when $y = 2$	Value when $y = 5$
$(y + 2) \times 10$		



CFU
How did I know to write 2 in for the y?

How did I know which operation to use first?

Pair share
Pick non volunteers

Order of Operations:

Parenthesis Exponents Multiply Divide Add Subtract

Skill Development

We do:

Steps:

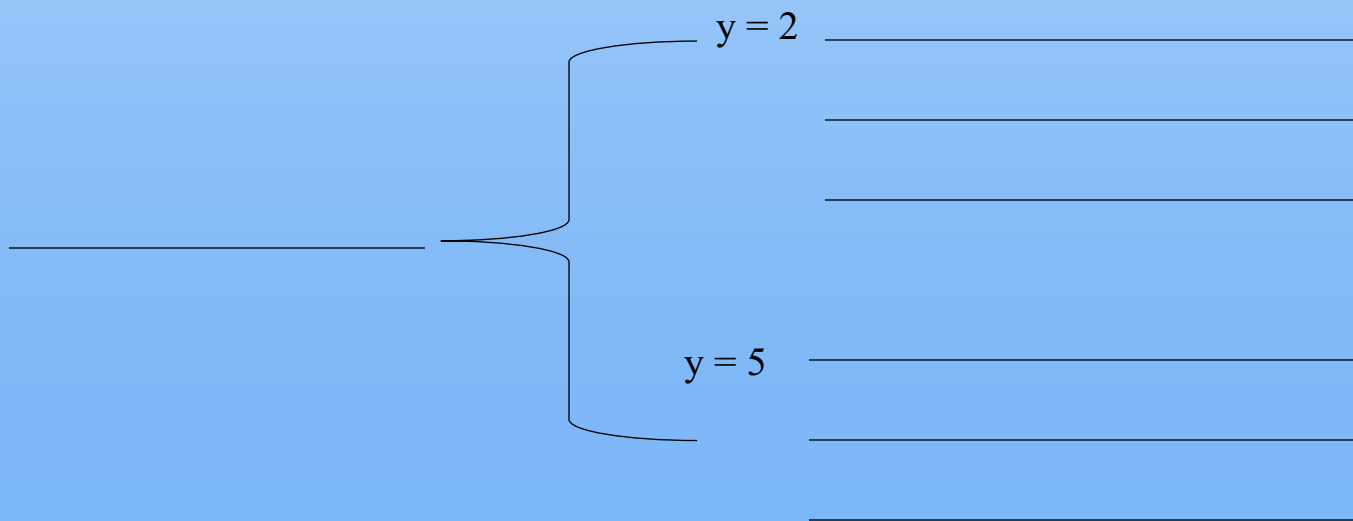
#1: Write the problem down

#2: Replace the variable with the number

#3: Use the order of operations to solve the problem

- Using a brace map we will evaluate the expressions:

Expression	Value when $y = 2$	Value when $y = 5$
$(10 - y) \times (y \times 2)$		



CFU

How did we know to write 2 in for the y ?

How did we know which operation to use first?

Pair share
Pick non volunteers

Skill Development

You do:

Steps:

#1: Write the problem down

#2: Replace the variable with the number

#3: Use the order of operations to solve the problem

- Using a brace map we will evaluate the expressions:

Expression	Value when $y = 2$	Value when $y = 5$
$(y + 2) \times 10$		

$y = 2$

Do on white board

How did you know?

$y = 5$

How did you get that answer?

Closure

■ What do we call a LETTER or SYMBOL that is used to stand for an unknown number?

■ On White Board

■ What did you learn about variables today?

■ Pair-share, volunteers

Independent Practice

- Worksheet. - Alternative Approach