## Do Now: Answer the following questions.

- 1. In English, what does it mean to "commute?"
- 2. In English, what does it mean to "associate?"

Commute means to change locations.

Associate means to group together.

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Sep 21-12:11 PM

## 2.1 Properties and Operations

7.NS 7.EE

- SWBAT add and multiply integers using properties.
- SWBAT create, evaluate, and simplify algebraic expressions involving variables.

Calculators: No

**Commutative Property of Addition** 

Words: In a sum, you can add the numbers in any order.

Numbers: 4 + 5 = 5 + 4Algebra: a + b = b + a

Sep 18-9:34 AM

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#### **Commutative Property of Multiplication**

Words: In a product, you can multiply the numbers in any

order.

Numbers: 4 \* 5 = 5 \* 4

Algebra: a \* b = b \* a

#### **Associative Property of Addition**

Words: Changing the grouping of the numbers in a sum

doesn't change the sum.

Numbers: (9+6)+2=9+(6+2)

Algebra: (a + b) + c = a + (b + c)

#### **Associative Property of Multiplication**

Words: Changing the grouping of the numbers in a

product doesn't change the product.

Numbers: (9 \* 6) \* 2 = 9 \* (6 \* 2)

Algebra: (a \* b) \* c = a \* (b \* c)

You buy a portable CD player for \$48, rechargeable batteries with charger for \$25, and a CD case for \$12. Find the total cost. (48+25)+12 (48+25+12) (48+25+12) (48+25+12) (48+25+12)

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During the summer, you work 5 hours a day as a lifeguard ata beach and earn \$9 each hour. How much money do you earn during a 6-day work week?

(5(9)(6) 45(6) 5(6)(9)

30 (9)

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Evaluate 4xy, when x = -7 and y = 25

4(-7)(25)

4(25)(-1)

700)

Sep 22-8:10 AM

Evaluate 23\*5¢, when c = -2

$$23(5)(-2^{3})$$
 $23(5)(4)$ 
 $23(20)$ 

-2(-2)

a.) x + 31 + 6

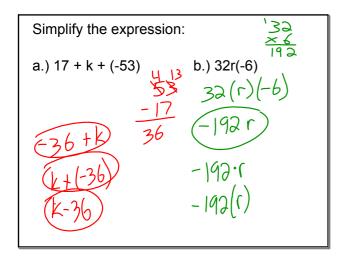
Simplify the expression:

39.08 b.) -4.01(8y)

-32.08 Y

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Identity Property of AdditionAdd-i+-iveWords:The sum of a number and the additive identity (0, 0) is the number.Numbers:-6+0=-6Algebra:x+0=x

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Sep 27-7:50 AM

#### **Identity Property of Multiplication**

Words: The product of a number and the additive

identity, 1, is the number.

Numbers: -6 \* 1 = -6

Algebra: x \* 1 = x

Statement	Property Illustrated
(-5)(1) = -5	Id. Prop. of Mult.
2 + (-9) = -9 + 2	Comm. Prop. of Add.
$y^2 + 0 = y^2$	Id. Prop. of Add.
2(pq) = (2p)q	ASSOC. Prop of Mult.
3a + 0 = 3a	Id. Prop. of Add.
7 * t = t * 7	Comm. Prop. of Mult.
-19(1) = -19	Id. Prop. of Mult.
5 + (-12) = -12 + 5	Comm. Prof. of Arch.

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#### **Unit Analysis**

Words: A conversion factor that converts a given

measurement to different units.

Example: 1 foot = 12 inches

1 yard = 3 feet

1 gallon = 16 ounces

The Steel Dragon 2000 is the world's longest roller coaster. Its length is 2711 yards. How long is the roller coaster in feet?

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The Boston Marathon is 26.2 miles long. How long is the marathon in feet?

# How do you convert from one metric unit to another?

By multiplying or dividing by factors of 10.

This can easily be done by moving the decimal to the right when multiplying and moving the decimal to the left when dividing.

The mnemonic below is also very helpful.

K H D B (meter) d c m (gram) (liter)

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How do you convert from one metric unit to another?

By moving the decimal point to the right or to the left.

King Henry Died By drinking chocolate milk

Kilo Hecto Deca Base deci centi milli
K H D B (meter) d c m
(gram)
(liter)

Use a conversion factor to perform the indicated conversion.

1. 400 centimeters to meters.

2. 11 kilograms to milligrams.

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3. 8.25 hectaliters to liters.

4. 72.1 decimeters to decameters.

Exit Pass 2.1

Describe and correct the error in converting 80 ounces to pounds.

80 ounces = <u>80 ounces</u> \* <u>16 ounces</u> = 1,280 pounds 1 pound



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## **Bonus Pass 2.1**

Are putting on your socks and putting on your shoes commutative activities? Explain.



Working individually or with a partner, complete the classwork.

pg. 66 #16-39 all

"Don't blame the sea if you cannot catch a fish."



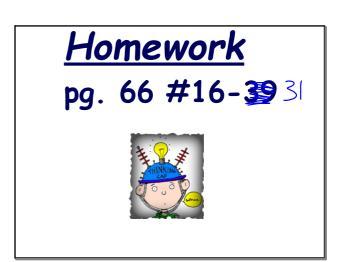
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## **Reflection of Today's Lesson**

#### 2.1 Properties and Operations

7.NS

- 7.EE
- SWBAT add and multiply integers using properties.
- SWBAT create, evaluate, and simplify algebraic expressions involving variables.



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