## Grade: 8 Math

1Benchmark \#: 8.1.2.A1a-b

## State Language:

Generates and/ or solves real-world problems with rational numbers using the concepts of these properties to explain
Reasoning: a) commutative, associative, distributive, and substation properties; b) identity and inverse properties of addition and multiplication.
Concept (Students will know):

- Commutative, associative properties of addition and multiplication
- Identity Properties of addition, multiplication and zero
- Distributive property and how to recognize it in a problem.
- Substitution property
- A number multiplied by its reciprocal is 1 and is the multiplicative inverse


## Student Friendly Language:

Solves problems using the concepts of the commutative, associative, distributive, identity and inverse properties

## Skills (Students will do):

*Name and explain each type of property
DOK Level:

Commutative properties when more than two numbers are in an addition or multiplication problem.
*Identify a real-life problem as a distributive property problem and substitute in the numbers to be able to work it.
*Classify which property a particular type of problem belongs.
*Know the identity properties and identify them.
*Recognize a particular property in a given problem.

## Big Ideas:

Knowing that a list numbers can be multiplied or added in any order and the result will be the same.
Knowing that when you add zero to a number, the answer is always the same.
When you multiply a number by zero, the result will always be zero.
Knowing, not necessarily the name of the property but now they work in the number system.

## Essential Questions:

1. When zero is added to a number, does it change the value of the number?
2. When zero is multiplied by a number, the answer is what?
3. When can you use the commutative property of addition or multiplication?
4. What is the method for solving problems using the distributive property?
5. What is the difference between commutative and associative property?

## Core Materials

Textbook -Glencoe Pre-Algebra book

Supplemental Materials:
Teacher-generated materials
Glencoe supplemental workbooks
Study Island
BAIP

## Teaching Strategies:

Guided practice
Worksheets
Standard -based technology
Mix and match games

## Mastery Check Items:

