Topic 2 L.3 - The Order of Operations

Warm-Up

We remember the order of operations with the acronym PEMDAS. Define each part of PEMDAS.

P =

E =

M/D =

A/S =

Guided Practice

1. 1. What operation is evaluated first?
   2. What operations are evaluated next?
   3. What operations are always evaluated last?
   4. What is the final answer?

**Solve.**

**Guided Practice with Word Problems**

Consider a family of that goes to a soccer game. Tickets are each. The mom also buys a soft drink for. How would you write this expression?

How much will this outing cost?

Consider a different scenario: The same family goes to the game as before, but each of the family members wants a drink. How would you write this expression?

How much will this outing cost?

Exercises 6–7

**Why is Order Important?**

Which value will we evaluate first within the parentheses? Evaluate.

Evaluate the rest of the expression.

What do you think will happen when the exponent in this expression is outside of the parentheses? Will your answer be the same?

Which should we evaluate first? Evaluate.

What happens differently here than in our last example?

Evaluate to find the final answer.

What was different between the two expressions?

HOMEWORK

Lesson Summary

**Numerical Expression:** A *numerical expression* is a number, or it is any combination of sums, differences, products, or divisions of numbers that evaluates to a number.

Statements like “” or “” are not numerical expressions because neither represents a point on the number line. Note: Raising numbers to whole number powers are considered numerical expressions as well since the operation is just an abbreviated form of multiplication: .

**Value of a Numerical Expression:** The *value of a numerical expression* is the number found by evaluating the expression.

For example: is a numerical expression, and its value is .

Evaluate each expression.