



MATH NEWS



LAFAYETTE
PARISH SCHOOL SYSTEM

Grade 6, Module 4, Topic F

6th Grade Math

Module : Expressions & Equations

Math Parent Letter

This document is created to give parents and students a better understanding of the math concepts found in Eureka Math (© 2013 Common Core, Inc.) that is also posted as the Engage New York material which is taught in the classroom. Module 4, Topic F students demonstrate their knowledge of expressions from previous topics in order to write and evaluate expressions and formulas. Students bridge their understanding of reading and writing expressions to substituting values in order to evaluate them. Students use variables to write expressions and equations involving addition, subtraction, multiplication and /or division. They evaluate those expressions when they are given the value of the variable.



Focus Area Topic F:

Writing and Evaluating Expressions – Addition and Subtraction

Words to Know:

Expression – Numbers, symbols and operators (such as + and ×) grouped together that show the value of something.

Number Sentence – Math sentence written using mathematics symbols and numerals.

Variable – A symbol for a specific number we don't know yet. It is usually a letter like x or y.

Evaluate – To calculate the value of an equation.

Sum – The result of adding two or more numbers.

Difference- The result of subtracting two numbers.

Product- The result of multiplying two or more numbers

Quotient – The answer after you divide one number by another.

Equation – An equation says that two things are the same, using mathematical symbols.

Focus Area Topic F:

Writing and Evaluating Expressions- Addition and Subtraction

When writing expression, make sure to be as specific as possible when describing the variable. For example, when defining the variable instead of “C= Cindy’s miles” because miles is not a number, we should say C = Cindy’s miles per hour.

Example Problem and Solution:

Variable	Incomplete Description	Complete Description with Units
Joshua’s Speed (J)	Let J = Joshua’s Speed	Let J = Joshua’s speed in meters per second
Rufus’s height (R)	Let R = Rufus’s height	Let R = Rufus’s height in centimeters
Milk sold(M)	Let M = the amount of milk sold	Let M= the amount of milk sold in gallons
Colleen’s time in the 40 meter hurdles(C)	Let C = Colleens time	Let C = Colleen’s time in seconds

Example Problem and Solution:

Kara went shopping today. She bought 4 more items than Sherri did. Write an expression to represent the number of items Sherri bought. Let K represent the number of items Kara bought.

Solution: $K - 4$

Ian scored 3 fewer goals than Julia in the first half of the soccer season. Write an expression for the number of goals Julia scored. Let I = the number of goals Ian scored.

Solution: $I + 3$

If Ian scored 5 goals, how many goals did Julia score?

$5 + 3 = 8$; If Ian scored 5 goals then Julia scored 8 goals.

Focus Area Topic F:

Writing and Evaluating Expressions- Addition and Subtraction

A data table can help us organize data and see patterns. We can use variables to make generalizations about the patterns we see.

It is imperative student's define the variable in very specific terms in order to know what the expression represents.

If something is measured, include units.

If something is counted, include that it is a number of items.

Example Problem and Solution:

Terry was 5 when his baby sister Malaya was born.

Complete the table modeling this situation

Malaya's Age in Years	Terry's Age in Years
2	7
4	9
6	11
8	13
10	?

How old is Terry when Malaya is 10 years old?

Solution: Terry is 15 years old.

Write an expressions that describes the relationship of Terry's age in years to Malaya's age in years.

Solution: Let M stand for Malaya's age and T stand for Terry's age.

$$M + 5 = T \text{ or } T - 5 = M$$

How old will Malaya be when Terry is 20 years old?

Solution: Malaya will be 15 years old.

Writing and Evaluating Expressions – Multiplication and Division

In the previous example we created expressions that used addition and subtraction. In this lesson we will use multiplication and division to develop expressions.

Example and Solutions:

The farmer's market is selling bags of apples. In every bag there are 3 apples. Complete the table

Number of Bags	Total Number of Apples
1	3
2	6
3	9
4	12
b	?

What if we bought some undetermined number of bags of apples? (b). What expression could we use to calculate the number of apples in (B) bags?

Let a = the number of apple

Let b = the number of bags of apples

Solution: $a = 3b$; The number of apples is equal to the number of bags of apples.

The following lesson requires students to combine what they know about writing expressions to writing expressions having both addition or subtraction and multiplication or division.

Example and Solutions:

The Paint Station charges \$3.00 for one shoe rental and \$5.00 for every hour a patron uses their paint ball facility.

- Write an expression that models this situation.
Let t = the total cost per patron
Let h = the total number of hours used

$$t = 3 + 5h$$

- If Juan spends 3 hours at the Paint Station, how much will it cost him?

$$t = 3 + 5(3)$$

$$t = \$ 18.00$$

It will cost Juan \$18.00 at the Paint Station