



# MATH NEWS



LAFAYETTE  
PARISH SCHOOL SYSTEM

Grade 4, Module 5, Topic F

## 4<sup>th</sup> Grade Math

Module 5: Fraction Equivalence, Ordering, and Operations

### 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 5 of Eureka Math (Engage New York) covers fraction equivalence, ordering, and operations.



### Focus Area Topic : F

Addition and Subtraction of Fractions by Decomposition

#### Words to Know:

**Fraction greater than 1** - a fraction with a numerator that is greater than the denominator -- sometimes called an improper fraction

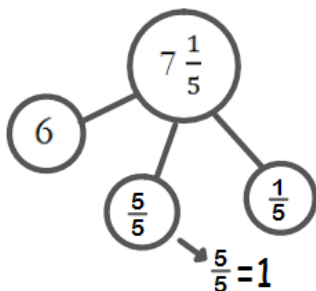
**Mixed number** - number made up of a whole number and a fraction less than one

#### Compose and Decompose Whole Numbers

In both the addition and subtraction of fractions, students will need to compose and decompose whole numbers into fractions.

Let's consider  $7\frac{1}{5} - \frac{2}{5}$ .

To solve, we can use a number bond to rename  $7\frac{1}{5}$  as  $6\frac{6}{5}$ .



Now we can subtract  $\frac{2}{5}$  from  $6\frac{6}{5}$ .

$$6\frac{6}{5} - \frac{2}{5} = 6\frac{4}{5}$$

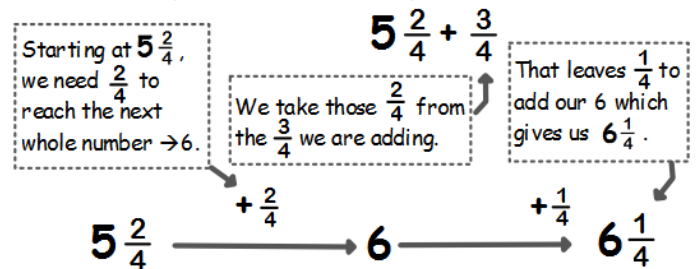
### Focus Area Topic F:

Addition and Subtraction of Fractions by Decomposition

#### Addition and Subtraction of Fractions

Topic F provides students with the opportunity to use their understandings of fractions as they explore addition and subtraction of mixed number.

In this example, we will count up using the arrow way.



Students learn to subtract mixed numbers by decomposing the total into a mixed number and an improper fraction to either subtract a fraction or a mixed number.

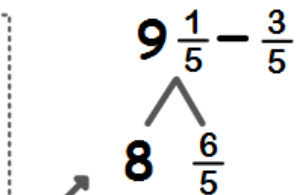
In this example, the student decomposes to subtract one mixed number from another mixed number.

$$11\frac{1}{5} - 2\frac{3}{5}$$

We begin by subtracting the whole numbers first.  $11 - 2 = 9$

Then we used a number bond to decompose  $9\frac{1}{5}$  into  $8\frac{5}{5}$  and  $\frac{1}{5}$ .

The fractions  $\frac{5}{5}$  and  $\frac{1}{5}$  can be composed to make  $\frac{6}{5}$ .



$$8\frac{6}{5} - \frac{3}{5} = 8\frac{3}{5}$$

Now  $\frac{3}{5}$  can be subtracted from  $\frac{6}{5}$ .

$$11\frac{1}{5} - 2\frac{3}{5} = 8\frac{3}{5}$$

### OBJECTIVES OF TOPIC F

- ▶ Estimate sums and differences using benchmark numbers.
- ▶ Add mixed numbers and fractions.
- ▶ Subtract mixed numbers and fractions.