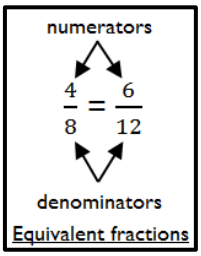
Fifth Grade Mathematics Newsletter

Marking Period 2, Part 2

MT	Learning Goals by Measurement Topic (MT) Students will be able to . . .
Number and Operations - Fractions	• use equivalent fractions (fractions that have the same amount of value) as a strategy to add and subtract fractions with unlike denominators. • solve word problems involving addition and subtraction of fractions with unlike denominators. • apply understanding of **factors** and **multiples** to generate equivalent fractions and add fractions with unlike denominators. • explain the relationship among numerators and denominators to add and subtract fractions with unlike denominators. • solve word problems involving multiplication of fractions and whole numbers and multiplication of fractions and fractions. • identify multiplication of a fraction and a whole number as it relates to **resizing (scaling)**. • use visual fraction models (pictures) to multiply a fraction by a fraction. 
Number and Operations in Base Ten	• use the standard algorithm to multiply multi-digit whole numbers.

Thinking and Academic Success Skills (TASS)		
	It is . . .	In mathematics, students will . . .
Synthesis	putting parts together to build understanding of a whole concept or to form a new or unique whole.	• use knowledge of **factors**, **multiples**, equivalent fractions, and number lines to add fractions with unlike denominators. • consider the relationship between denominators and equivalent fractions to subtract fractions with unlike denominators. • identify how estimation, number line drawings, and common denominators help to subtract fractions with unlike denominators.
Metacognition	knowing and being aware of one's own thinking and having the ability to monitor and evaluate one's own thinking.	• identify how number line drawings and thinking about the relationship between denominators help determine whether fractions are being added accurately. • apply knowledge of operations with whole numbers to help make generalizations about operations with fractions.

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Learning Experiences by Measurement Topic (MT)

MT	In school, your child will . . .	At home, your child can . . .
Number and Operations - Fractions	• use pattern blocks and other visual fraction models to represent equivalent fractions as a strategy to add and subtract fractions with unlike denominators. • use benchmark fractions (a common fraction that you can judge other fractions by) to estimate the answer to addition and subtraction of fractions with unlike denominators. Example: $\frac{7}{8}+\frac{5}{6}$ is less than 2 because each fraction is less than the benchmark of 1 whole. • create number line representations to add and subtract fractions with unlike denominators. • identify efficient strategies for determining common denominators and equivalent fractions to add and subtract fractions. $\frac{2}{3}+\frac{5}{4}=\frac{8}{12}+\frac{15}{12}$ $\frac{a}{b}+\frac{c}{d}=\frac{ad+bc}{bd}$ • solve word problems involving multiplications of fractions and whole numbers. • interpret multiplication of a fraction and a whole number as **resizing (scaling)** . Example: Given the expression $\frac{?}{?}$ x 18, write a fraction that will result in a product greater than, less than and equal to 18.	• create equivalent fractions to solve real-world problems involving adding and subtracting fractions with unlike denominators. (Look through recipes and add the fractional amounts.)  Example: a recipe calls for $\frac{3}{4}$ cup of sugar and $\frac{1}{2}$ cup of flour. How many cups is that altogether? Possible questions: ○ What strategy is most efficient in helping to solve the problem? ○ How can using a benchmark fraction help to estimate the solution? ○ Synthesize by asking, "Is there anything you have learned about adding and subtracting whole numbers that may help you add and subtract fractions?" • multiply a whole number by a fraction and find relevant applications. Example: If you read for $\frac{1}{2}$ hour every day, how many hours have you read by the end of the week? Website to support learning about fraction models: http://www.mathplayground.com/Fraction_bars.html
Number and Operations in Base Ten	• use the standard algorithm to multiply multi-digit wh numbers. 2 2 3 4 256 x47 1792 +10240 12032	• look in newspapers or magazines for numbers to create multiplication problems using the standard algorithm to practice multi-digit whole numbers.

Glossary	
	factor: a number that is multiplied by another number **multiple:** a product of a given whole number and any other whole number **resizing (scaling):** a multiplicative comparison which compares the size of the product to the size of one factor based on the other factor

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