4th Grade Math

Module 1: Place Value of Multi-Digit Whole Numbers

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 1 of Eureka Math (Engage New York) covers place value, rounding, and algorithms for addition and subtraction.

Focus Area ▶ Topic E: *Multi-Digit Whole Number Subtraction*

Words to Know:

Algorithm - a process or set of rules to be followed in calculations

Difference - answer to a subtraction problem

Bundling, renaming, regrouping, trading - exchanging 10 ones for 1 ten, 10 tens for 1 hundred and so on

Unbundling, renaming, regrouping, trading - exchanging 1ten for 10 ones, 1 hundred for 10 tens and so on

Decomposing using Place Value

It is vital that students understand how to decompose larger units into smaller units as shown in the example below.

One of the 5 tens was unbundled or decomposed into 10 ones. That makes 13 ones. Now we can subtract the 8 ones.

OBJECTIVES OF TOPIC E

▶ Use place value understanding to decompose to smaller units once using the standard subtraction algorithm, and apply the algorithm to solve word problems using tape diagrams.

▶ Use place value understanding to decompose to smaller units up to 3 times using the standard subtraction algorithm, and apply the algorithm to solve word problems using tape diagrams.

▶ Use place value understanding to fluently decompose to smaller units multiple times in any place using the standard subtraction algorithm, and apply the algorithm to solve word problems using tape diagrams.

▶ Solve two-step word problems using the standard subtraction algorithm fluently modeled with tape diagrams and assess the reasonableness of answers using rounding.
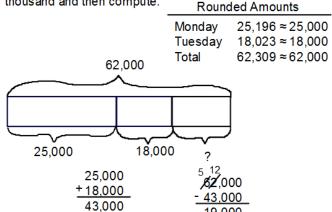
Focus Area ▶ Topic E: *Multi-Digit Whole Number Subtraction*
Understanding the Subtraction Algorithm

Students will be asked to solve multi-step word problems involving the subtraction of numbers into the millions. These problems are designed to give ample practice with the subtraction algorithm. It is expected that they master the algorithm by the end of 4th grade.
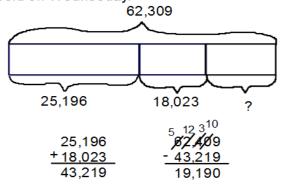
Example Problem and Answer

On Monday, a farm sold 25,196 pounds of potatoes. On Tuesday, they sold 18,023 pounds. On Wednesday, they sold some more potatoes. In all, they sold 62,409 pounds of potatoes in the 3 days.

a. About how many pounds of potatoes did the farm sell on Wednesday? Estimate by rounding each value to the nearest thousand and then compute.

Rounded Amounts		
Monday	$25{,}196 \approx 25{,}000$
Tuesday	$18{,}023 \approx 18{,}000$
Total	$62{,}309 \approx 62{,}000$

The farm sold about 19,000 pounds of potatoes on Wednesday.

b. Find the precise number of pounds of potatoes sold on Wednesday.

The farm sold 19,190 pounds of potatoes on Wednesday.

c. Is your precise answer reasonable? Compare your estimate from (a) to your answer from (b). Write a sentence to explain your reasoning.

Yes, my answer 19,190 is reasonable because it is close to my estimate of 19,000.