MATH NEWS

Grade 3, Module 2, Topic D

3rd Grade Math

Module 2: Place Value and Problem Solving with Units of Measure

Math Parent Letter

document gives parents and students a better understanding of the Eureka math concepts that are taught in the classroom. Module 2 of Eureka Math covers Place Value and Problem-Solving with Units of Measure. This newsletter will discuss Module 2, Topic D.

Topic D. Two- and Three- Digit Measurement Addition Using Standard Algorithm

Vocabulary Words

- Standard Algorithm
- Place Value Chart
- Mental Math
- Reasonable
- Rename
- Regroup
- Precise
- Addends

Helpful Hints!

≈ Approximate = Equals

Objective of Topic D

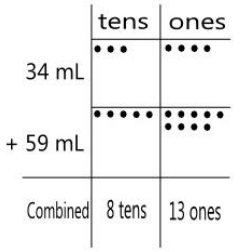
1. Add measurements using the standard algorithm to compose larger units once.
2. Add measurement using the standard algorithm to compose larger units twice.
3. Estimate sums by rounding and apply to solve measurement word problems.

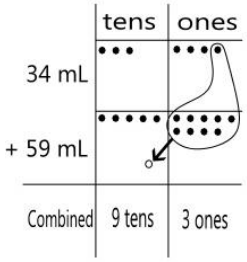
Focus Area– Topic D

Two- and Three- Digit Measurement Addition Using Standard Algorithm

Solve using a place value chart

Tommy has a beaker with 34 mL of water and a beaker with 59 mL of water. If he pours the two beakers into one beaker, how much water would he have in that one beaker?





Regroup because 13 ones = 10 ones + 3 ones. To regroup, circle the 10 ones. To show that the 10 ones will be **renamed** to 1 ten, draw an arrow from the 10 ones to the tens place. Then draw a number disk in the tens place to represent 1 ten.

Now there are 9 tens and 3 ones which is equal to 93.

Solve using standard algorithm

Start with the ones place. 9 + 4 = 13. Rename to 1 ten and 3 ones. Write the 1 so that it crosses the line under the tens in the tens place or above the 5 in the tens place (both are correct). Write the 3 below the line in the ones place. Add the tens place. 5 + 3 + 1 = 9. Write the 9 below the line in the tens place. Don't forget to include the unit of measure in your answer.

$$\begin{array}{r} {\scriptstyle 1}\,59 \\ +\ 34 \\ \hline 93 \end{array} \qquad \begin{array}{r} 59 \\ +\ 34 \\ \hline {\scriptstyle 1}\,93 \end{array}$$

$$\begin{array}{r} 59\ \text{mL} \\ +\ 34\ \text{mL} \\ \hline {\scriptstyle 1}\,93\ \text{mL} \end{array}$$

Tommy has 93 mL of water if he combines the two beakers into one.

Solve using Standard Algorithm

Casey ran for 55 minutes on Thursday. On Friday she ran for 29 minutes more than she ran on Thursday. How many total minutes did she run on Thursday and Friday?
First find out how many minutes she ran on Friday.

Thursday = 55 minutes
Friday = 55 minutes + 29 minutes

$$\begin{array}{r} 55 \text{ minutes} \\ +\ 29 \text{ minutes} \\ \hline 84 \text{ minutes} \end{array}$$

She ran 84 minutes on Friday

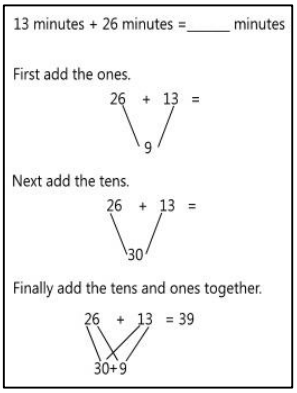
Next find out how many minutes she ran on Thursday and Friday together.

Casey ran 139 minutes total

$$\begin{array}{r} 84 \text{ minutes} \\ +\ 55 \text{ minutes} \\ \hline 139 \text{ minutes} \end{array}$$

Solve using Mental Math

It takes Joey 13 minutes to mow the front lawn. It takes him 26 more minutes to mow the back lawn than it does to mow the front lawn. What is the total time Joey spent mowing the lawn?



Mentally add the ones.
6 ones + 3 ones = 9 ones
9 ones = 9

Mentally add the tens.
2 tens + 1 ten = 3 tens
3 tens = 30

Mentally add the ones and tens together.
30 + 9 = 39

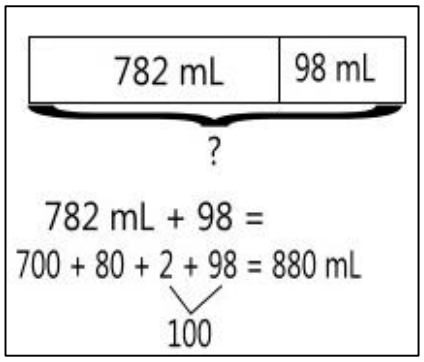
Joey mowed the front lawn in 13 minutes and the back lawn in 39 minutes. Add 39 + 13 to find out how many total minutes Joey mowed the lawn.

39 + 13 = 52

Joey mows the lawn for a total of 52 minutes.

Draw a Tape Diagram to Solve

Tammy is making lemonade. She uses 782 mL of water and 98 mL of squeezed lemon juice. What is the capacity of the lemon juice and water?



The total capacity of Tammy's lemonade is 880 mL.

Estimate the Sum by Rounding

Doug practices foot ball for 459 minutes the first week and 262 minutes the second week. Estimate the total time practiced in three different ways.

459 + 262 = 721

a.	Nearest Hundred	500 + 300 = 800
b.	Nearest Fifty	450 + 250 = 700
c.	Nearest Ten	460 + 260 = 720

Because the **addends** (numbers added together) are close to the halfway point between the rounding units, rounding to the nearest 10 of 50 would give a more **precise** estimate.

Only C could help check to see if the answer is **reasonable** (makes sense). If A or B was used the exact answer could be way off. A close estimate is needed to see if the actual sum is reasonable.

Estimate the Sum

A black bear weighs 187 kilograms. Her cub weighs 73 kilograms. Estimate the total weight of the bear and her cub and then find the exact weight of the bear and her cub.

Estimated

187 + 74
190 + 70 = 260

Actual

187 + 74 = 261

The bear and her cub weigh ≈ 260 kg. The bear and her cub have an actual weight of 261.