

# FAMILY MATH

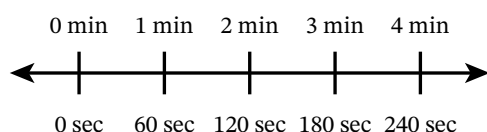
## Problem Solving with Measurement

Dear Family,

Your student is learning to solve problems with units of time, weight, and liquid volume by converting from larger units to smaller units. They convert hours to minutes, minutes to seconds, and pounds to ounces by using multiplication. Students explore the relationships among liquid volume measurements. They continue to practice renaming larger units as smaller units as they solve addition and subtraction problems.

### Key Terms

cup	pint
gallon	pound
ounce	quart



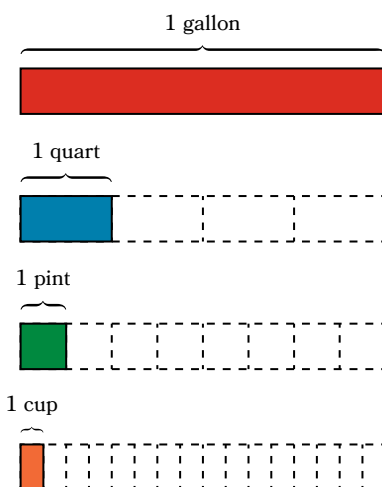
Minutes	Seconds
1	60
5	300
7	420
12	720

Students use number lines and conversion tables to rewrite units.

$$32 \text{ lb } 8 \text{ oz} + 11 \text{ oz} = 531 \text{ oz}$$

$$\begin{array}{r} 32 \\ \times 16 \\ \hline 182 \\ + 320 \\ \hline 512 \end{array} \quad \begin{array}{l} 8 \text{ oz} + 11 \text{ oz} = 19 \text{ oz} \\ + 19 \\ \hline 531 \end{array}$$

Students use multiplication to convert larger units to smaller units and then add or subtract.



Students use a tape diagram to see the relationships among the customary measurements of liquid volume including gallons, quarts, pints, and cups.

## At-Home Activities

### Minutes and Seconds

Help your student practice adding and subtracting units of time. You can use a stopwatch, or the timer on a phone, to help you figure out how long it takes your student to complete two related activities. For example, find the time it takes your student to get dressed. Then find the time it takes your student to eat breakfast. Round both times to the nearest whole second. Then ask your student to tell you either the total amount of time it takes to complete both activities together or how much longer one activity takes than the other.

### What If We Pour. . .?

Encourage your student to think about units of liquid volume. Look for containers of liquid that come in gallons, quarts, or pints, such as milk or juice. Ask your student to figure out how many cups were in each container when each container was full and unopened. Then ask questions about the amounts in the containers. Consider using the following questions to guide their thinking.

- “If we pour 3 cups out of this gallon of milk then how many cups will we have left?”
- “If we pour 1 quart of orange juice and then pour 1 pint of cranberry juice into a container, how many cups of orange juice and cranberry juice will we have altogether in the container?”