Estimate and Measure Liquid Volume

Let's measure and estimate the volume of liquids and containers.

Warm-up

Number Talk: Divide by 3

Find the value of each expression mentally.

- $30 \div 3$
- $60 \div 3$
- $63 \div 3$
- $54 \div 3$

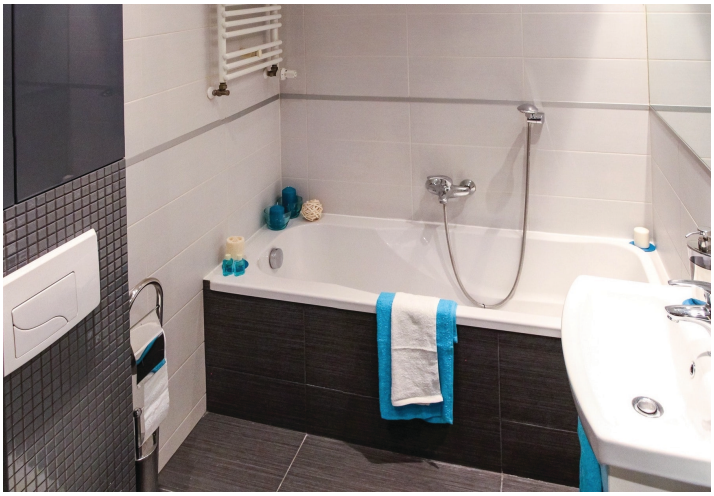
Activity 1

Estimate the Volume of Containers

1. Clare says it takes about 2 liters of water to fill the bathtub.

   Jada says it takes about 20 liters of water to fill the bathtub.

   Kiran says it takes about 200 liters to fill the bathtub.



   Who do you think has the best estimate? Explain or show your reasoning.

2. About how many liters does it take to fill each container? Circle your estimate. Explain how you know.

a. 

2 liters 20 liters 200 liters

b. 

2 liters 20 liters 200 liters

3. Match each container to its volume. Be ready to explain your reasoning.

container

a. sink



b. kiddie pool



c. pot



d. toilet tank



number of liters

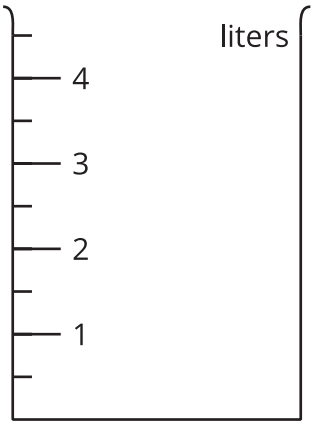
- 4 liters
- 6 liters
- 500 liters
- 10 liters

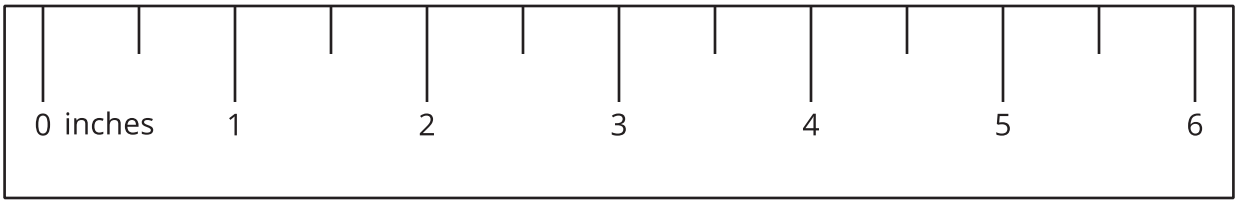
Activity 2

Measure the Volume of Liquids

What do you notice? What do you wonder?







1. The container in each image is marked in liters. Find the volume of the liquid.

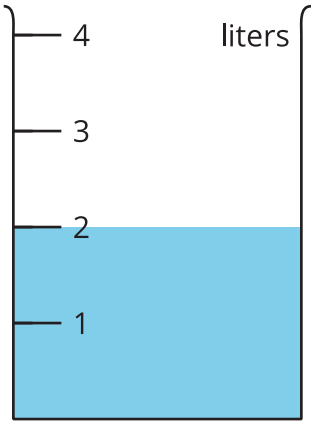
A



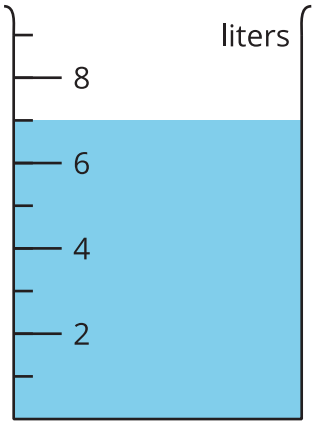
B



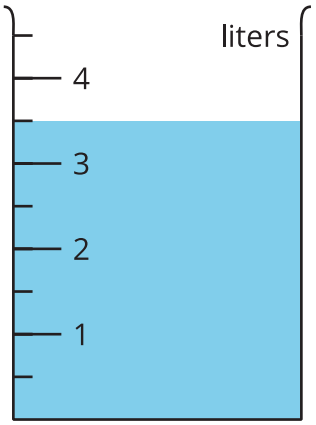
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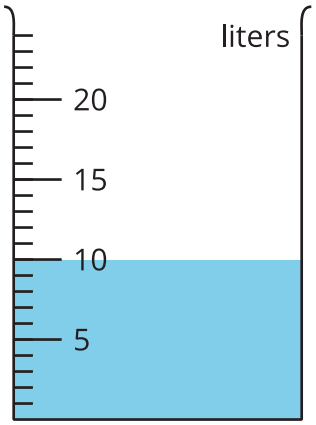
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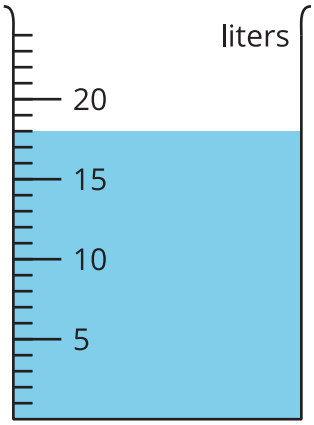
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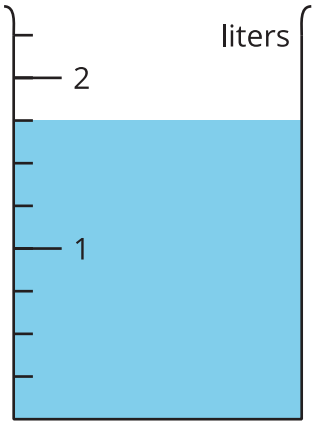
F



G

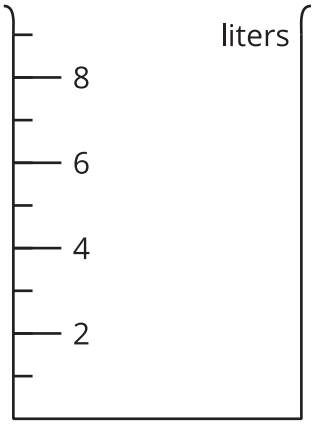


H

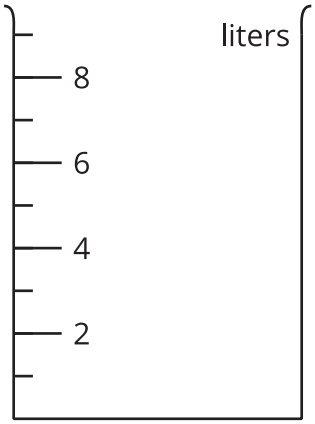


2. Shade the images of the empty containers to show each volume of liquid.

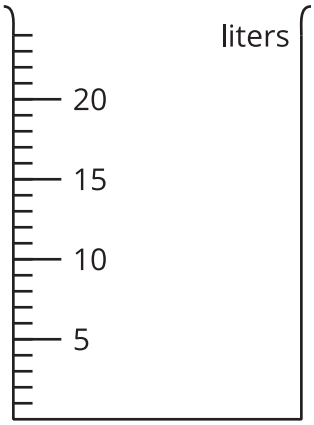
P: 1 liter



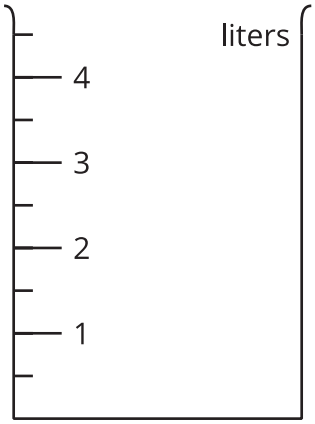
Q: 8 liters



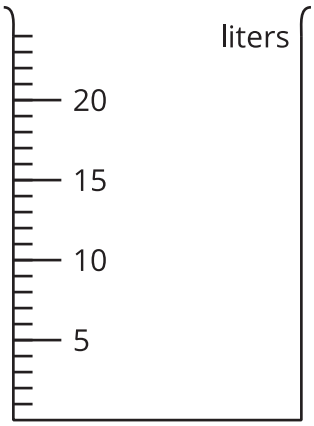
R: 7 liters



S: $2\frac{1}{2}$ liters



T: 23 liters



If you have time:

Of all the containers in the activity, which 2 containers have the most liquid in them? How many liters would you have if you combined the liquid in them? Explain or show your reasoning.

Section B Summary

We learned how to measure and estimate weight in **grams** and **kilograms.**

This paper clip weighs *about* 1 gram.



This basket of apples weighs *about* 1 kilogram.



We also learned how to measure and estimate the **volume of liquids** and the **volume of containers** in **liters**.



The volume of liquid in this container is 5 liters.

The volume of the container is about 10 liters.