

LESSON

11·7

Measuring Capacity



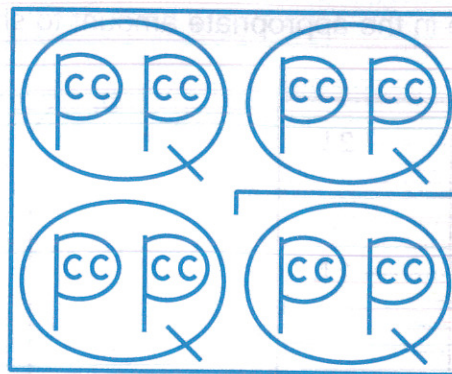
Math Message

1 pint = _____ cups

1 quart = _____ pints

1 half-gallon = _____ quarts

1 gallon = _____ quarts



Think: How can the picture above help you remember how many cups are in a pint, how many pints are in a quart, and how many quarts are in a gallon?

Units of Capacity

1. Circle the unit you would use to measure each amount.

A large jug of milk milliliters or liters

Water in a thimble milliliters or liters

A glass of juice milliliters or liters

Water in a water cooler milliliters or liters

Water in a fish tank milliliters or liters

Liquid in a paper cup milliliters or liters

A tank of gas milliliters or liters

A spoonful of oil milliliters or liters

A large bottle of water milliliters or liters

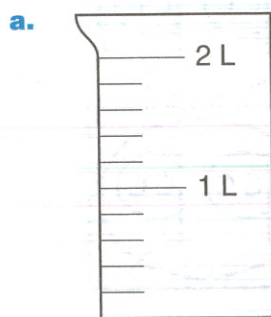
A can of soup milliliters or liters

2. Explain how you decided which unit to use for a can of soup.

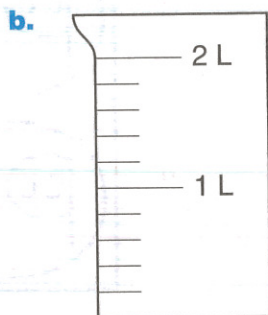
LESSON
11.7

Comparing Capacities

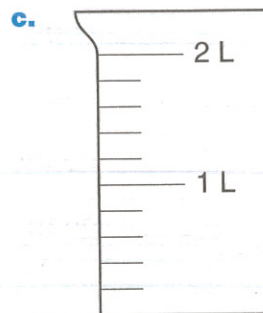
1. Shade in the appropriate amount to show the capacity of each of your containers.



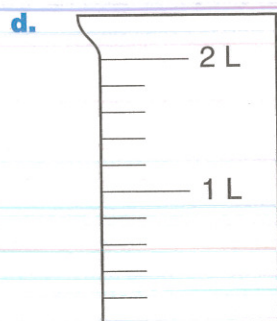
Container _____



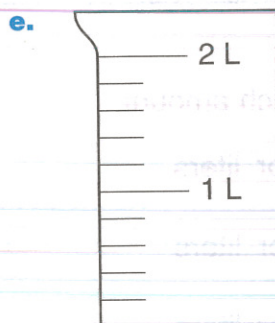
Container _____



Container _____



Container _____



Container _____

- f. Circle the container with the largest capacity. Was your prediction accurate?

Units of Capacity

U.S. Customary	Metric
1 gallon (gal) = 4 quarts (qt)	1,000 milliliter (mL) = 1 liter (L)
1 quart (qt) = 2 pints (pt)	1 milliliter (mL) = $\frac{1}{1,000}$ liter (L)
1 pint (pt) = 2 cups (c)	
1 pint (pt) = 16 fluid ounces (fl oz)	

2. Use the conversion table above to solve the problems.

a. 6 qt = _____ pt

b. _____ mL = 8 L

c. _____ pt = 48 fl oz

d. 6,450 mL = _____ L

e. 10 qt = _____ gal

f. _____ mL = 0.500 L

g. 4 gal = _____ c

h. 32 mL = _____ L

LESSON
11.7**Solving Capacity Problems**

Solve. You may draw pictures to help you.

1. Adaline filled her watering can with 1,250 mL of water.
After watering her plants she had 485 mL left.
How much water did she use? _____ mL

2. Betty and Don spent the morning squeezing oranges
for juice. Betty squeezed $1\frac{2}{4}$ L and Don squeezed $1\frac{3}{4}$ L.
What is the total amount of juice? _____ L

3. There are 450 mL of syrup in 1 can. What is the
total amount of syrup in 6 cans? _____ mL

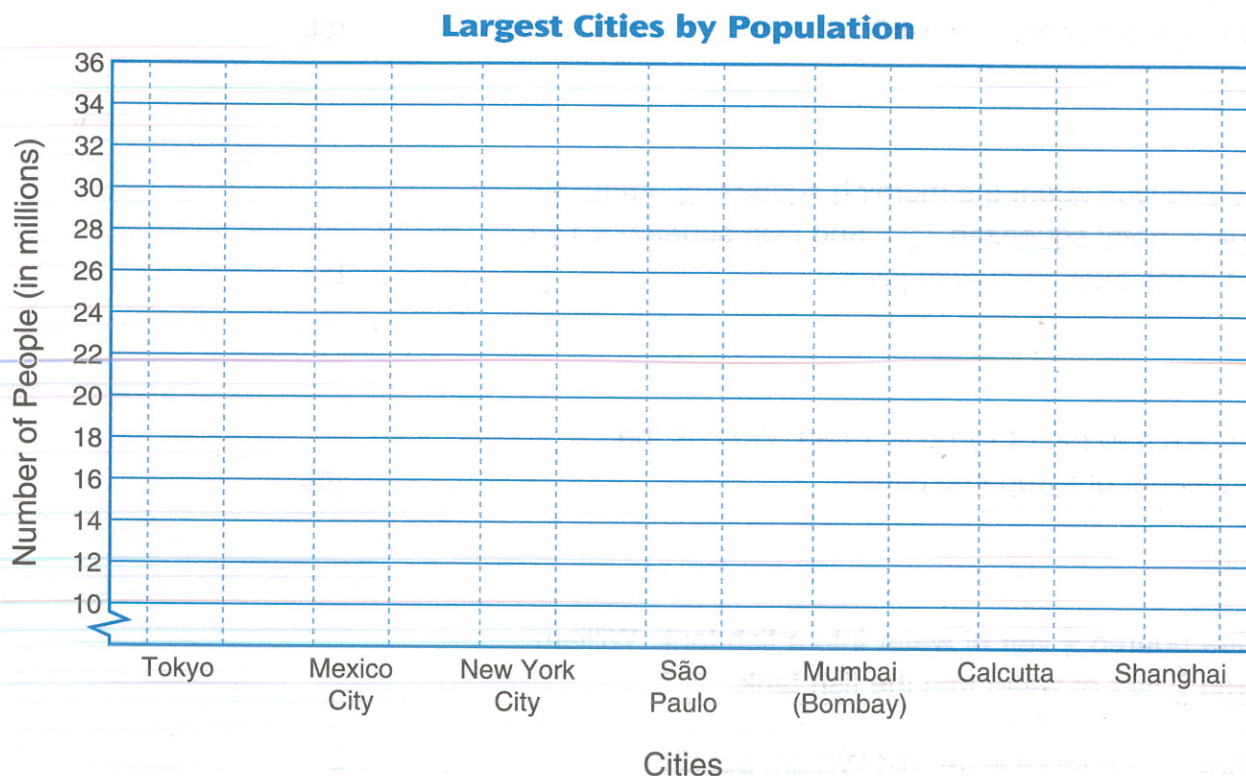
4. Dimitra poured $\frac{2}{5}$ liter of water into a fish tank. William
poured $\frac{4}{5}$ liter of water into the fish tank.
 - a. How much more water did William pour? _____ L
 - b. How many milliliters is that? _____ mL

5. Raina brought a 1,500 mL jug of water to the school
picnic. Her water jug has enough water to fill 5 glasses.
How much does each glass hold? _____ mL

6. The teacher set out 24 bowls of glue for the students
to use for an art project. Each bowl holds 75 mL of glue.
How much glue did the teacher need to fill all the bowls? _____ mL

LESSON
11.7**Largest Cities by Population**

1. Use the data in the Largest Cities by Population table at the top of *Student Reference Book*, page 302 to complete the bar graph. Round each figure to the nearest million.



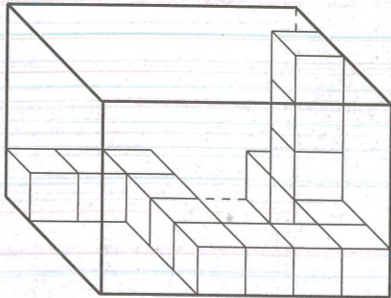
2. Make three statements comparing the cities in the bar graph.

Example: *About 21 million more people live in Tokyo than in Shanghai.*

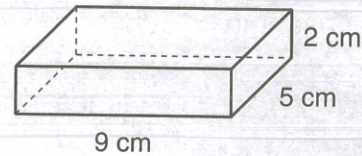

LESSON
11.7
Math Boxes

1. What is the total number of cubes needed to completely fill the box?

_____ cubes



2. Calculate the volume.



Number model: _____

Volume = _____ cm^3



3. When you roll a 10-sided die, about what fraction of the time would you expect a multiple of 3 to come up?

Use a probability term to describe the likelihood of this event.



4. Complete.

a. $321 \text{ cm} = \underline{\hspace{2cm}} \text{ m}$

b. $56 \text{ cm} = \underline{\hspace{2cm}} \text{ mm}$

c. $14 \text{ ft } 4 \text{ in.} = \underline{\hspace{2cm}} \text{ in.}$

d. $2 \text{ mi} = \underline{\hspace{2cm}} \text{ ft}$

e. $5.3 \text{ km} = \underline{\hspace{2cm}} \text{ m}$

f. _____ $\text{mi} = 7,040 \text{ yd}$



5. Add.

a. $-46 + 20 = \underline{\hspace{2cm}}$

b. $-23 + (-18) = \underline{\hspace{2cm}}$

c. _____ $= 33 + (-17)$

d. _____ $= \$36.54 + (-\$57.81)$

e. $-\$131.09 + (-\$76.98) = \underline{\hspace{2cm}}$

6. If you travel at an average speed of 50 miles per hour, how far will you travel in

a. 3 hours? _____ miles

b. $\frac{1}{2}$ hour? _____ miles

c. $2\frac{1}{2}$ hours? _____ miles

d. $5\frac{3}{5}$ hours? _____ miles



STUDY LINK
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Capacity



Find at least one container that holds each of the amounts listed below.

Describe each container and record all the capacity measurements on the label.

1. Less than 1 Pint

Container	Capacity Measurements on Label
<i>bottle of hot chili sesame oil</i>	<i>5 fl oz, 148 mL</i>

2. 1 Pint

Container	Capacity Measurements on Label
<i>bottle of cooking oil</i>	<i>16 fl oz, 473 mL</i>

3. 1 Quart

Container	Capacity Measurements on Label

4. More than 1 Quart

Container	Capacity Measurements on Label

Complete.

5. 2 quarts = _____ pints

6. 3 gallons = _____ cups

7. _____ pints = 4 cups

8. _____ quarts = 12 cups

9. 6 pints = _____ quarts

10. _____ quarts = $2\frac{1}{2}$ gallons

Practice

11. $-3 + 7 =$ _____

12. _____ = $3 + (-7)$

13. _____ = $40 + (-80)$

14. $-60 + (-60) =$ _____