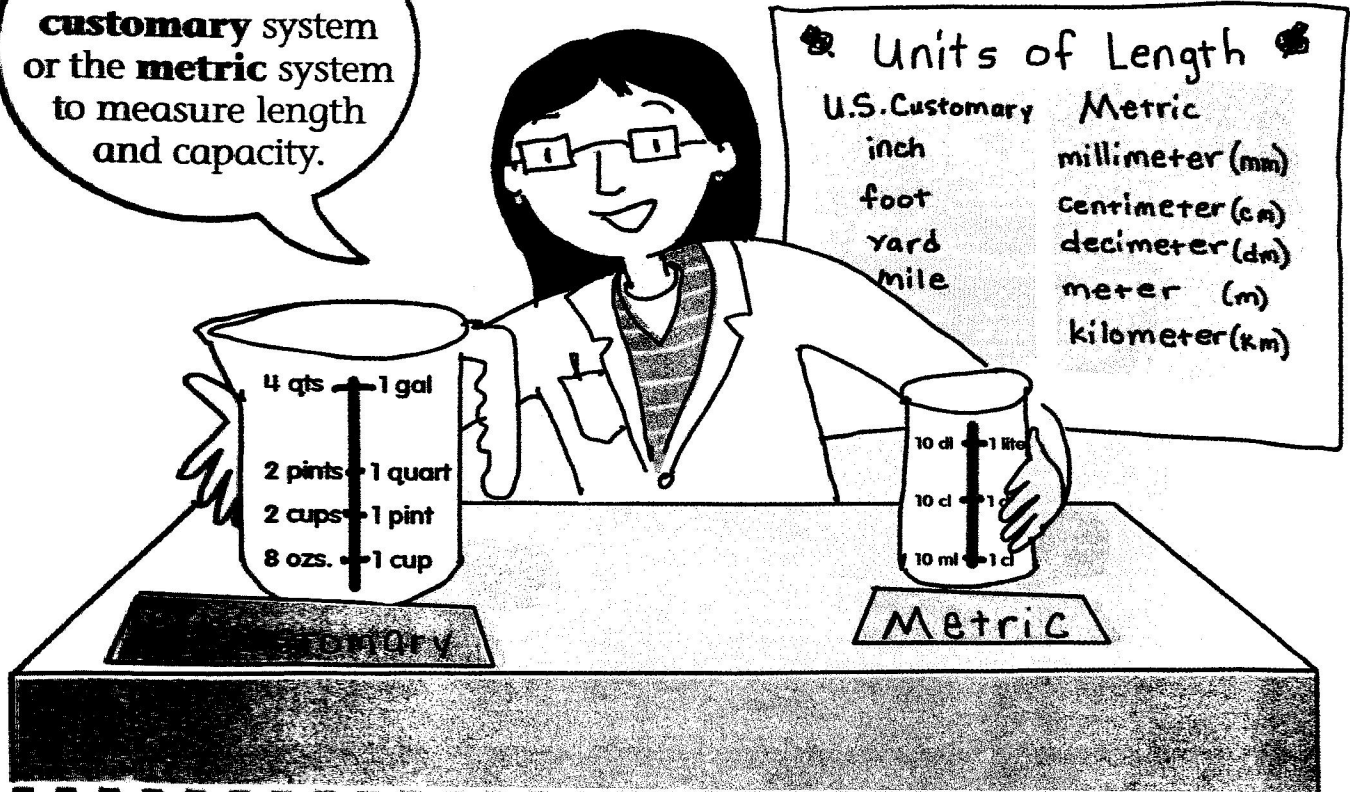


Equivalent Measurements

Skill: Convert units of length and capacity within measurement systems

You can use either the **U.S. customary** system or the **metric** system to measure length and capacity.



- 1** Lay out the mats and the Measurement Charts.
- 2** Look at each measurement on the mats and use the U.S. customary or metric charts to help you compute the equivalent measurement.
- 3** Find a number card that shows the answer and place it in the colored square.
- 4** Complete the written practice activity.

Measurement Charts
Length

12 inches = 1 foot
3 feet = 1 yard
5280 feet = 1 mile
1760 yards = 1 mile

10 millimeters (mm) = 1 centimeter (cm)
10 centimeters = 1 decimeter (dm)
10 decimeters = 1 meter (m)
1,000 meters = 1 kilometer (km)

Equivalent Measurements

Equivalent Measurements

24 inches = feet

4 meters = centimeters

5 yards = feet

1 1/2 feet = inches

2 kilometers = meters

9 feet = yards

2.5 meters = centimeters

3/4 meter = millimeters

1/2 mile = yards

10 millimeters = centimeters

10

2,000

16

1,000

100

3

Equivalent Measurements

length

1

24 inches = feet

2

4 meters = centimeters

3

5 yards = feet

4

$1\frac{1}{2}$ feet = inches

5

2 kilometers = meters

6

9 feet = yards

7

2.5 meters = centimeters

8

$\frac{3}{4}$ meter = millimeters

9

$\frac{1}{4}$ mile = yards

10

10 millimeters = centimeter

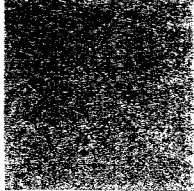
Equivalent Measurements

capacity

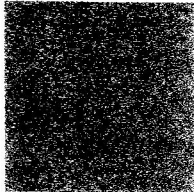
1

$\frac{1}{2}$ cup =  ounces

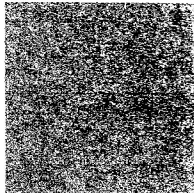
2

3 deciliters =  centiliters

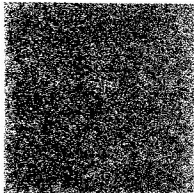
3

$1\frac{1}{2}$ quarts =  pints

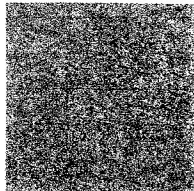
4

$1\frac{1}{2}$ centiliters =  milliliters

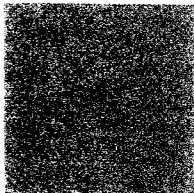
5

1 pint =  ounces

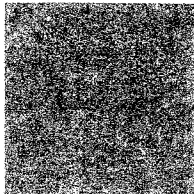
6

4 cups =  pints

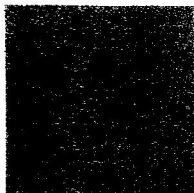
7

2 liters =  milliliters

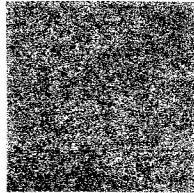
8

$2\frac{1}{4}$ gallons =  quarts

9

50 deciliters =  liters

10

1 liter =  centiliters

Measurement Charts

Length

U.S. Customary

12 inches = 1 foot

3 feet = 1 yard

5,280 feet = 1 mile

1,760 yards = 1 mile

Metric

10 millimeters (mm) = 1 centimeter (cm)

10 centimeters = 1 decimeter (dm)

10 decimeters = 1 meter (m)

1,000 meters = 1 kilometer (km)

2	400	1	<u>6</u>	18	2,000
3	250	750	15	440	36
4	4	30	2,000	3	15
16	5	1,000	2	<u>9</u>	100

Equivalent Measurements

Solve the word problems below and write the answers on the lines.

Length

Alex and his brother Max both like to run. Alex likes fun runs. Max competes in track events. During May, Alex participated in three fun runs, a 2.5K and two 3Ks, but he walked half the distance in each event. Max competed in track events every weekend, participating in three 800-meter long-distance runs, four 110-meter hurdles, three 200-meter sprints, a 200-meter relay, and a 400-meter relay.

In total, which brother ran the greatest distance during May?

What is the total distance (in meters) that Alex ran in the 2.5K race and the first 3K race?

What is the total distance (in decimeters) that Max ran in the hurdles and relay events?

Capacity

Lisa's family was getting ready for a Sunday afternoon picnic with the neighbors. Lisa was in charge of making lemonade. She needed to mix 3 cups of lemon juice with 2 gallons of water. The only measuring cup Lisa could find had a one-pint capacity.

How many times did Lisa have to fill the measuring cup with lemon juice?

How many times did Lisa have to fill the measuring cup with water?

How many total ounces of liquids did Lisa use to make the lemonade?

If fourteen people at the picnic wanted lemonade, how many 10-ounce glasses could each person have?

Compare the measurements below, using the greater than, less than, and equal to symbols.

7 yards 300 inches

1,750 milliliters $1\frac{1}{2}$ liters

100,000 cm 1 km

20 pints 2 gallons

15,000 mm 15 dm

4 quarts 128 ounces

15,000 inches $\frac{1}{4}$ mile

5 liters 600 centiliters