EUREKA MATH

A STORY OF UNITS

Mathematics Curriculum

Grade 2 • MODULE 2

Addition and Subtraction of Length Units

Problem Sets

Info for parents: http://bit.ly/pusdmath

Video tutorials: http://embarc.online

Version 3

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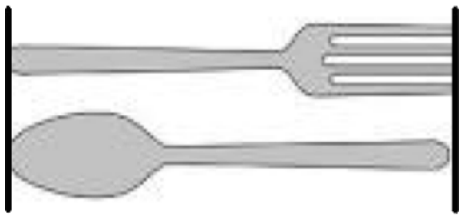
GRADE 2 • MODULE 2

Addition and Subtraction of Length Units

Name _____ Date _____

Use centimeter cubes to find the length of each object.

1. The picture of the fork and spoon is about _____ centimeter cubes long.



2. The picture of the hammer is about _____ centimeters long.

3. The length of the picture of the comb is about _____ centimeters.

4. The length of the picture of the shovel is about _____ centimeters.

5. The head of a grasshopper is 2 centimeters long. The rest of the grasshopper's body is 7 centimeters long. What is the total length of the grasshopper?

6. The length of a screwdriver is 19 centimeters. The handle is 5 centimeters long.

   a. What is the length of the top of the screwdriver?

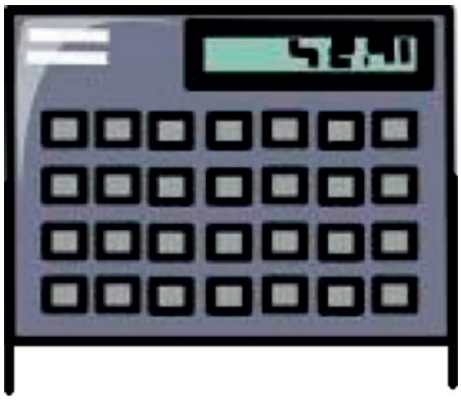
   b. How much shorter is the handle than the top of the screwdriver?

Name _____ Date _____

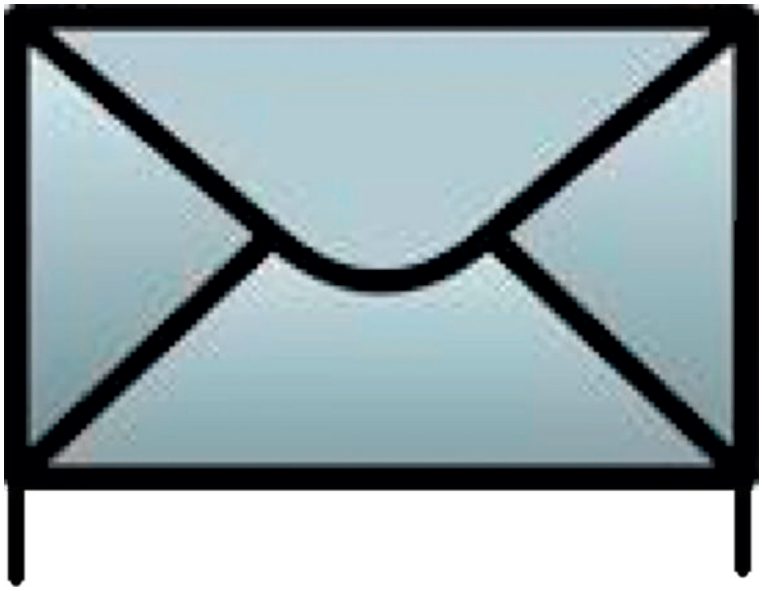
Find the length of each object using one centimeter cube. Mark the endpoint of each centimeter cube as you measure.

1. The picture of the eraser is about _____ centimeters long.

2. The picture of the calculator is about _____ centimeters long.

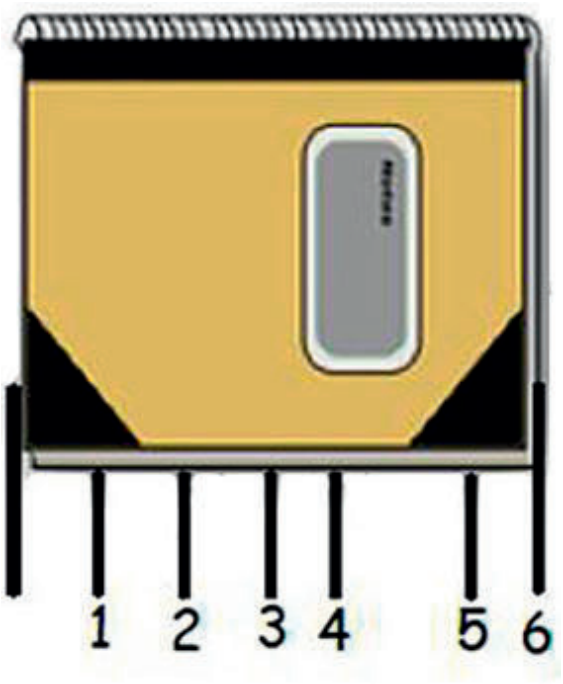


3. The length of the picture of the envelope is about _____ centimeters.



4. Jayla measured her puppet's legs to be 23 centimeters long. The stomach is 7 centimeters long, and the neck and head together are 10 centimeters long. What is the total length of the puppet?

5. Elijah begins measuring his math book with his centimeter cube. He marks off where each cube ends. After a few times, he decides this process is taking too long and starts to guess where the cube would end and then mark it.



Explain why Elijah's answer will be incorrect.

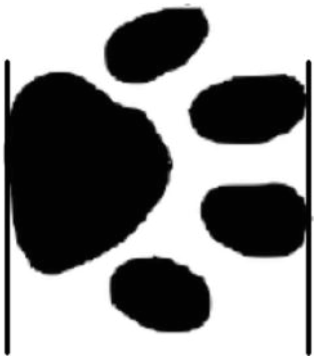
_____

_____

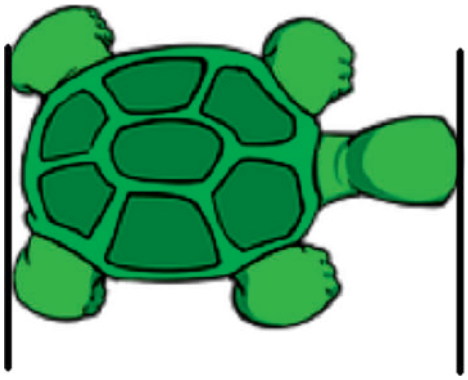
Name _____ Date _____

Use your centimeter ruler to measure the length of the objects below.

1. The picture of the animal track is about _____ cm long.

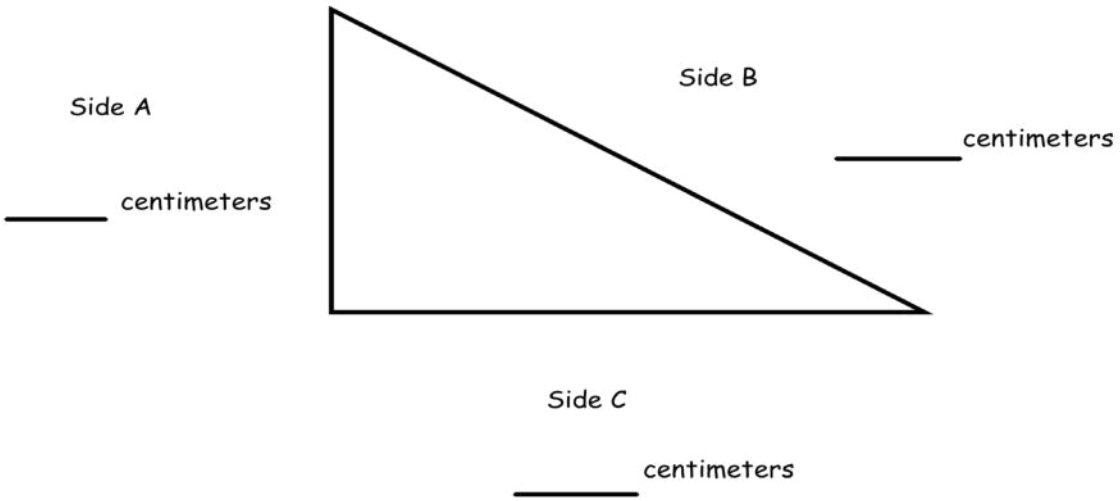


2. The picture of the turtle is about _____ cm long.



3. The picture of the sandwich is about _____ cm long.

4. Measure and label the length of each side of the triangle using your ruler.



a. Which side is the shortest? Side A Side B Side C

b. What is the length of Sides A and B together? _____ centimeters

c. How much shorter is Side C than Side B? _____ centimeters

Name _____ Date _____

1. Measure five things in the classroom with a centimeter ruler. List the five things and their length in centimeters.

Object Name	Length in Centimeters
a.	
b.	
c.	
d.	
e.	

2. Measure four things in the classroom with a meter stick or meter tape. List the four things and their length in meters.

Object Name	Length in Meters
a.	
b.	
c.	
d.	

3. List five things in your house that you would measure with a meter stick or meter tape.

   a. _____

   b. _____

   c. _____

   d. _____

   e. _____

   Why would you want to measure those five items with a meter stick or meter tape instead of a centimeter ruler?

   _____

   _____

   _____

4. The distance from the cafeteria to the gym is 14 meters. The distance from the cafeteria to the playground is double that distance. How many times would you need to use a meter stick to measure the distance from the cafeteria to the playground?

Name _____ Date _____

First, estimate the length of each line in centimeters using mental benchmarks. Then, measure each line with a centimeter ruler to find the actual length.

1.

a. Estimate: _____ cm b. Actual length: _____ cm

2.

a. Estimate: _____ cm b. Actual length: _____ cm

3.

a. Estimate: _____ cm b. Actual length: _____ cm

4.

a. Estimate: _____ cm b. Actual length: _____ cm

5.

a. Estimate: _____ cm b. Actual length: _____ cm

6. Circle the correct unit of measurement for each length estimate.

   a. The height of a door is about 2 (centimeters/meters) tall.

      What benchmark did you use to estimate? _____

   b. The length of a pen is about 10 (centimeters/meters) long.

      What benchmark did you use to estimate? _____

   c. The length of a car is about 4 (centimeters/meters) long.

      What benchmark did you use to estimate? _____

   d. The length of a bed is about 2 (centimeters/meters) long.

      What benchmark did you use to estimate? _____

   e. The length of a dinner plate is about 20 (centimeters/meters) long.

      What benchmark did you use to estimate? _____

7. Use an unsharpened pencil to estimate the length of 3 things in your desk.

   a. _____ is about _____ cm long.

   b. _____ is about _____ cm long.

   c. _____ is about _____ cm long.

Name _____ Date _____

Measure each set of lines in centimeters, and write the length on the line. Complete the comparison sentences.

1. Line A _____

   Line B _____

   a. Line A _____ cm Line B _____ cm

   b. Line A is about _____ cm longer than Line B.

2. Line C _____

   Line D _____

   a. Line C _____ cm Line D _____ cm

   b. Line C is about _____ cm shorter than Line D.

3. Line E

   Line F

   Line G

   a. Line E _____ cm Line F _____ cm Line G _____ cm

   b. Lines E, F, and G are about_____ cm combined.

   c. Line E is about _____ cm shorter than Line F.

   d. Line G is about_____ cm longer than Line F.

   e. Line F doubled is about _____ cm longer than Line G.

4. Daniel measured the heights of some young trees in the orchard. He wants to know how many more centimeters are needed to have a height of 1 meter. Fill in the blanks.

   a. 90 cm + _____ cm = 1 m

   b. 80 cm + _____ cm = 1 m

   c. 85 cm + _____ cm = 1 m

   d. 81 cm + _____ cm = 1 m

5. Carol's ribbon is 76 centimeters long. Alice's ribbon is 1 meter long. How much longer is Alice's ribbon than Carol's?

6. The cricket hopped a distance of 52 centimeters. The grasshopper hopped 9 centimeters farther than the cricket. How far did the grasshopper jump?

7. The pencil box is 24 centimeters in length and 12 centimeters wide. How many more centimeters is the length than the width? _____ more cm

   Draw the rectangle and label the sides.

   What is the total length of all four sides? _____ cm

Name _____ Date _____

Measure each set of lines with one small paper clip, using mark and move forward. Measure each set of lines in centimeters using a ruler.

1. Line A _____

   Line B _____

   a. Line A

      _____ paper clips _____ cm

   b. Line B

      _____ paper clips _____ cm

   c. Line B is about _____ paper clips shorter than Line A.

   d. Line A is about _____ cm longer than Line B.

2. _____ Line L

   _____ Line M

   a. Line L

      _____ paper clips _____ cm

   b. Line M

      _____ paper clips _____ cm

   c. Line L is about _____ paper clips longer than Line M.

   d. Line M doubled is about _____ cm shorter than Line L.

3. Draw a line that is 6 cm long and another line below it that is 15 cm long. Label the 6 cm line C and the 15 cm line D.

   a. Line C _____ paper clips

      Line D _____ paper clips

   b. Line D is about _____ cm longer than Line C.

   c. Line C is about _____ paper clips shorter than Line D.

   d. Lines C and D together are about _____ paper clips long.

   e. Lines C and D together are about _____ centimeters long.

4. Christina measured Line F with quarters and Line G with pennies.

   Line F 

   Line G 

   Line F is about 6 quarters long. Line G is about 8 pennies long. Christina said Line G is longer because 8 is a bigger number than 6.

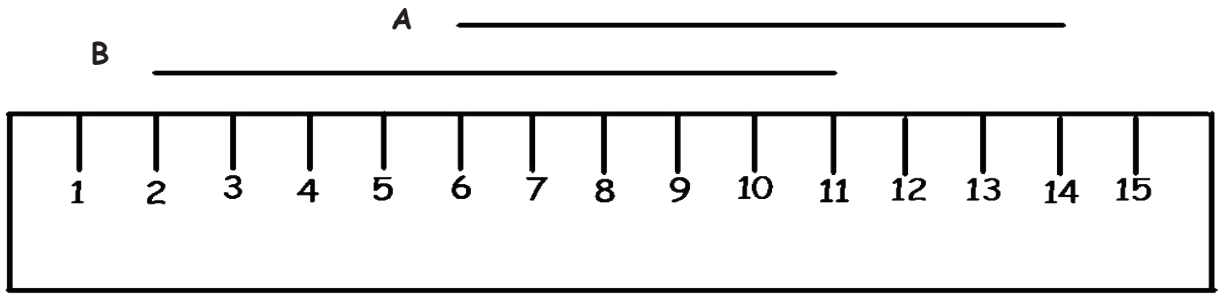
   Explain why Christina is incorrect.

   _____

   _____

Name _____ Date _____

1.



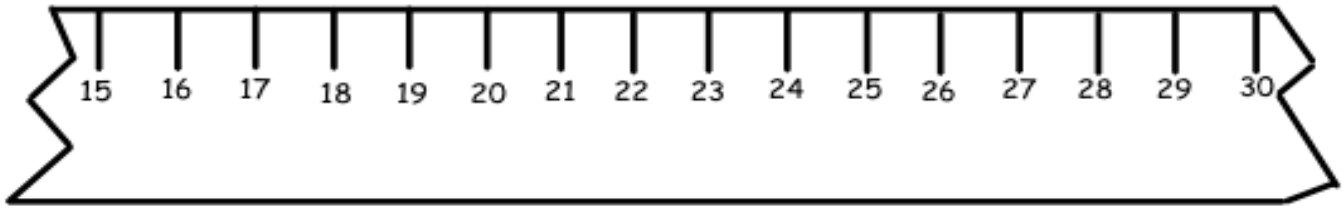
a. Line A is _____ cm long.

b. Line B is _____ cm long.

c. Together, Lines A and B measure _____ cm.

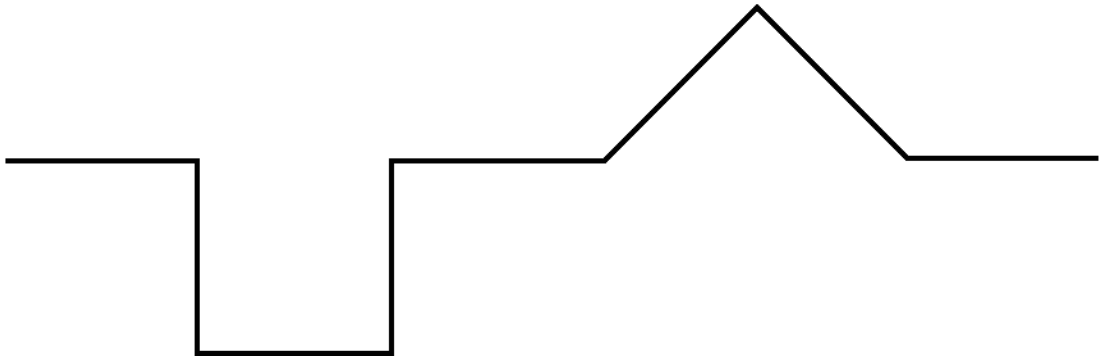
d. Line A is _____ cm (longer/shorter) than Line B.

2. A cricket jumped 5 centimeters forward and 9 centimeters back, and then stopped. If the cricket started at 23 on the ruler, where did the cricket stop? Show your work on the broken centimeter ruler.

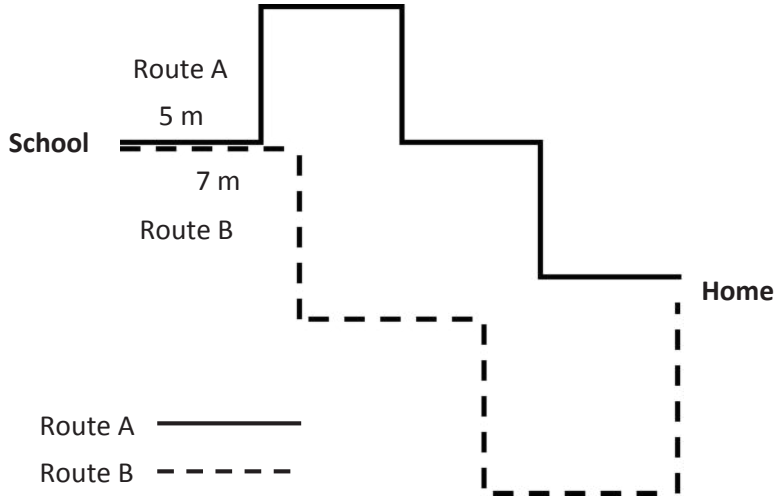


3. Each of the parts of the path below is 4 length units. What is the total length of the path?

_____ length units



4. Ben took two different ways home from school to see which way was the quickest. All streets on Route A are the same length. All streets on Route B are the same length.



a. How many meters is Route A? _____ m

b. How many meters is Route B? _____ m

c. What is the difference between Route A and Route B? _____ m

Name _____ Date _____

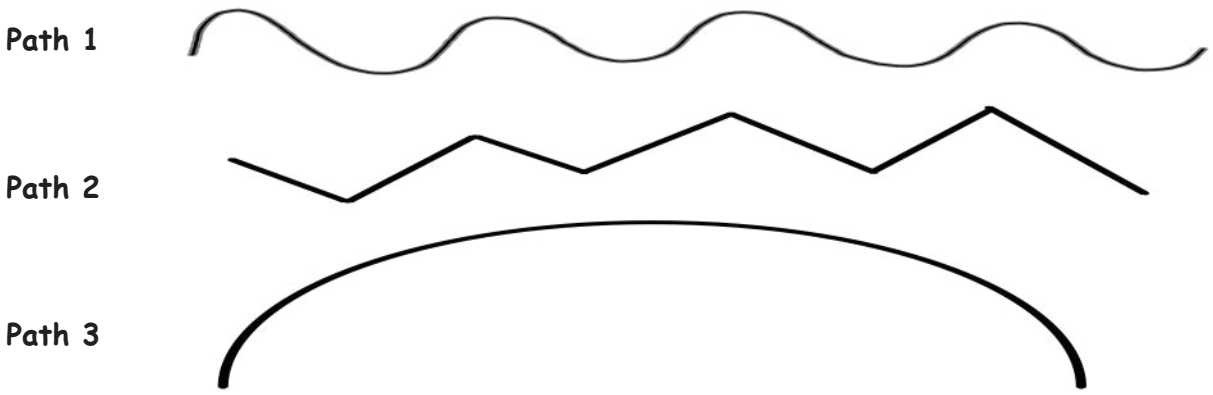
1. Complete the chart by first estimating the measurement around a classmate's body part and then finding the actual measurement with a meter strip.

Student Name	Body Part Measured	Estimated Measurement in Centimeters	Actual Measurement in Centimeters
	Neck		
	Wrist		
	Head		

a. Which was longer, your estimate or the actual measurement around your classmate's head? _____

b. Draw a tape diagram to compare the lengths of two different body parts.

2. Use a string to measure all three paths.

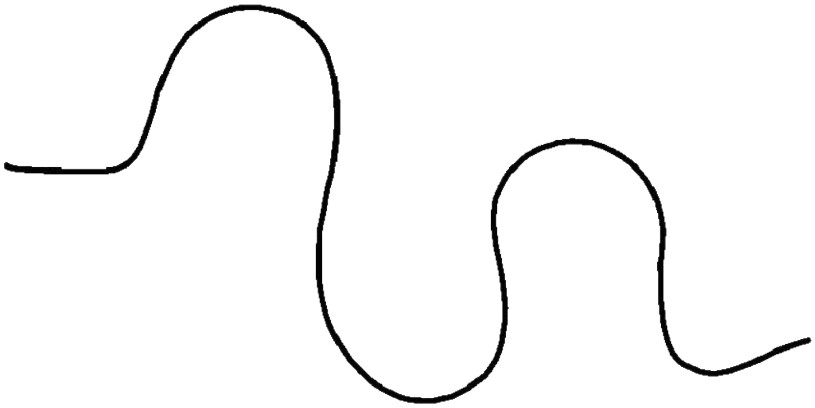


a. Which path is the longest? _____

b. Which path in the shortest? _____

c. Draw a tape diagram to compare two of the lengths.

3. Estimate the length of the path below in centimeters.



a. The path is about _____ cm long.

Use your piece of string to measure the length of the path. Then, measure the string with your meter strip.

b. The actual length of the path is _____ cm.

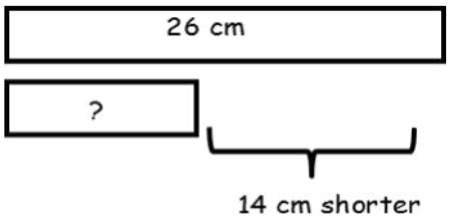
c. Draw a tape diagram to compare your estimate and the actual length of the path.

Name _____ Date _____

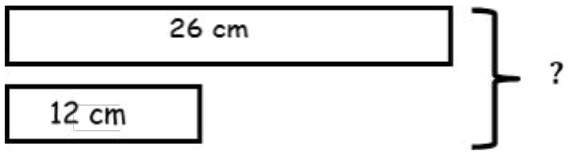
Use the RDW process to solve. Draw a tape diagram for each step. Problem 1 has been started for you.

1. Maura's ribbon is 26 cm long. Colleen's ribbon is 14 cm shorter than Maura's ribbon. What is the total length of both ribbons?

   Step 1: Find the length of Colleen's ribbon.



   Step 2: Find the length of both ribbons.



2. Jesse's tower of blocks is 30 cm tall. Sarah's tower is 9 cm shorter than Jessie's tower. What is the total height of both towers?

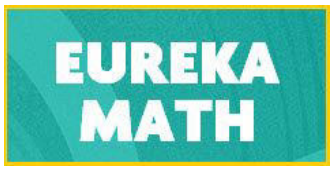
   Step 1: Find the height of Sarah's tower.

   Step 2: Find the height of both towers.

3. Pam and Mark measured the distance around each other's wrists. Pam's wrist measured 10 cm. Mark's wrist measured 3 cm more than Pam's. What is the total length around all four of their wrists?

   Step 1: Find the distance around both Mark's wrists.

   Step 2: Find the total measurement of all four wrists.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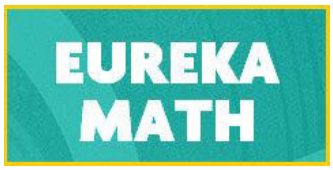
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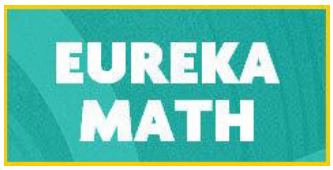
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