Homework Helpers
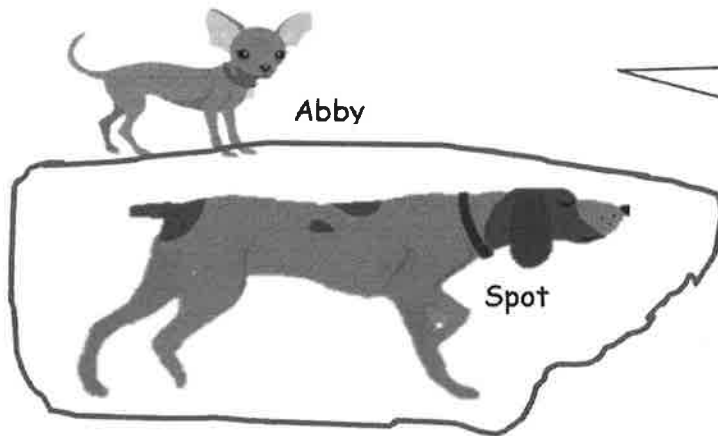
Grade 1
Module 3

G1-M3-Lesson 1

1. Follow the directions. Complete the sentence.
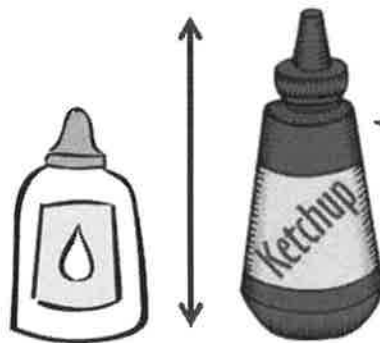
Circle the **longer** dog.

Abby

Spot

> I can see that Spot is longer because Spot and Abby are lined up perfectly, and Spot is sticking out further than Abby.
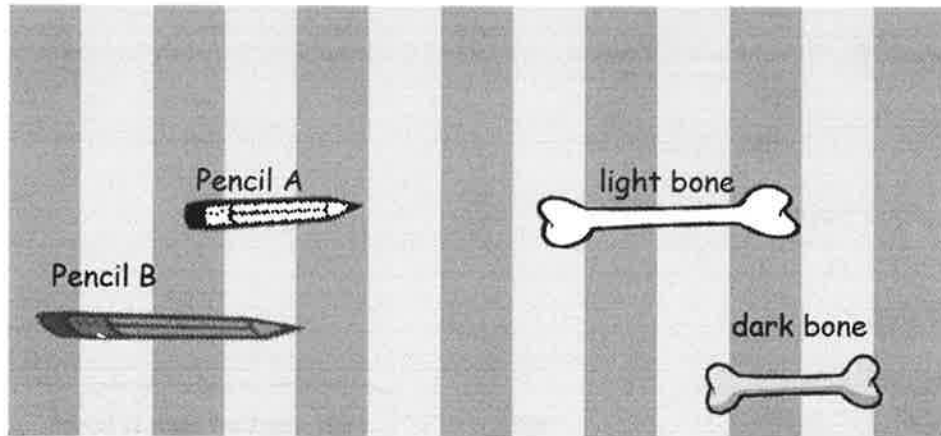
_____Spot_____ is longer than ___Abby___ .

2. Write the words **longer than** or **shorter than** to make the sentence true.

Ketchup

> The endpoints of the bottles are lined up. It's like they are standing on a table, which makes it easy to see. The glue is shorter!

The glue is ___shorter than___ the ketchup.

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Lesson 1:   Compare length directly and consider the importance of aligning endpoints.

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1

3.

Pencil B is _____ *longer than* _____ Pencil A.

The dark bone is _____ *shorter than* _____ the light bone.

> The end points are not lined up, but I can tell that Pencil B is longer because it crosses more than 3 stripes. Pencil A only crosses 2 stripes.

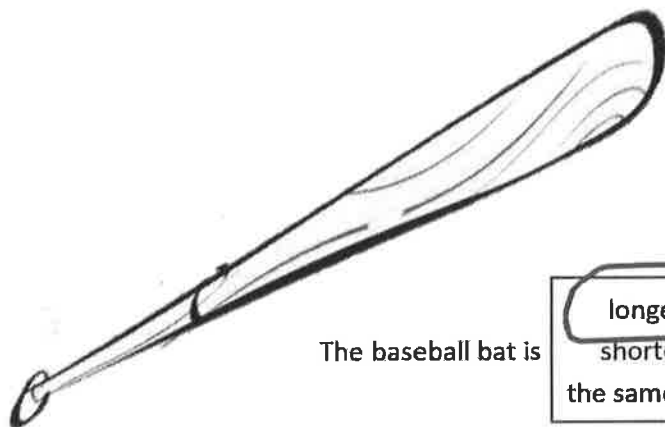Circle true or false.

The light bone is shorter than Pencil A.   **True** or **False**

---

4. Find 3 school supplies. Draw them here in order from **shortest** to **longest**. Label each school supply.

eraser   crayon   scissors

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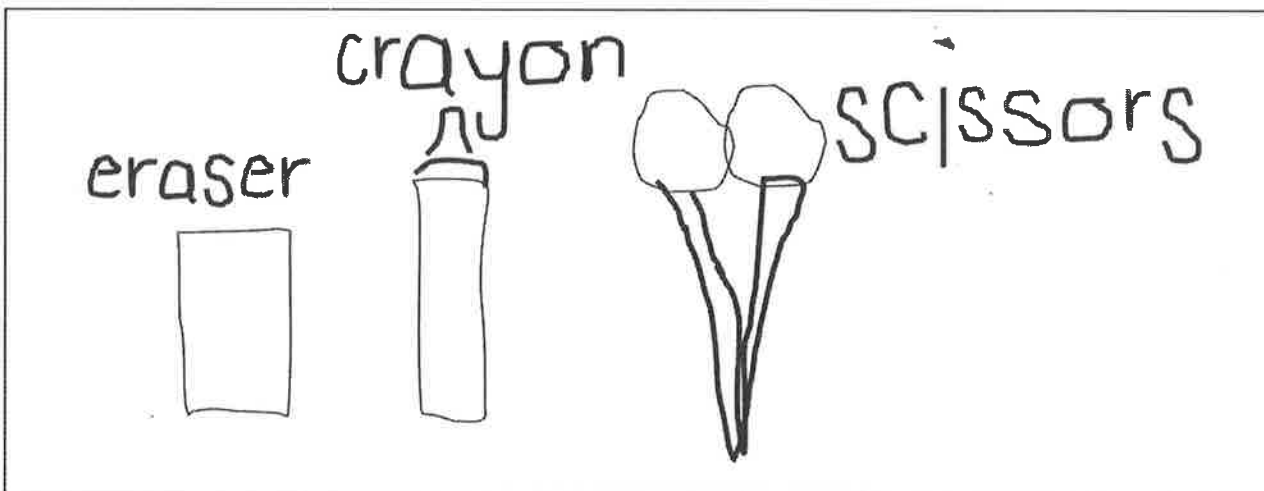
G1-M3-Lesson 2

1. Use the paper strip provided by your teacher to measure each picture. Circle the words you need to make the sentence true. Then, fill in the blank.

> I can see if the paper strip is longer or shorter than the baseball bat by lining up the endpoint of the paper strip with the endpoint of the bat. Then I can compare them!

The baseball bat is

| (longer than) |
| shorter than |
| the same length as |

the paper strip.

The book is

| longer than |
| (shorter than) |
| the same length as |

the paper strip.

> I know the baseball bat is longer than the paper strip, and the book is shorter than the paper strip, so the baseball bat must be longer than the book!

The baseball bat is ___*longer than*___ the book.

Lesson 2:   Compare length using indirect comparison by finding objects *longer than*, *shorter than*, and *equal in length to* that of a string.

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2. Complete the sentences with **longer than, shorter than,** or **the same length as** to make the sentences true.

The tube is ___*longer than*___ the bucket.

> I used my paper strip to measure. The tube is longer than the paper. The bucket is shorter than the paper strip, so I know that the tube must be longer than the bucket.

Use the measurements from Problems 1 and 2. Circle the word that makes the sentences true.

3. The baseball bat is (**longer**/shorter) than the bucket.

> If the baseball bat is longer than the paper strip, and the bucket is shorter than the paper strip, then the bat is longer than the bucket!

4. Order these objects from shortest to longest: bucket, tube, and paper strip

___*bucket*___   ___*paper strip*___   ___*tube*___

> The bucket is shorter than the paper strip, and the paper strip is shorter than the tube, so the bucket is the shortest, and the tube is the longest.

Lesson 2:   Compare length using indirect comparison by finding objects *longer than, shorter than,* and *equal in length to* that of a string.
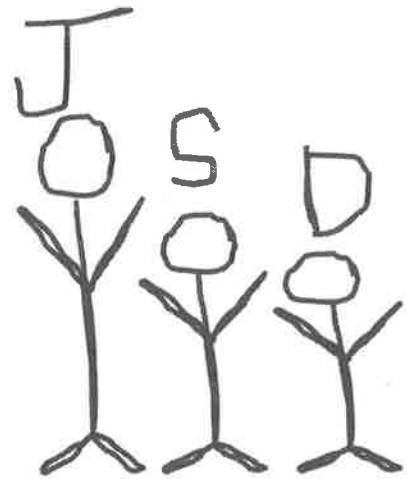
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5. Draw a picture to help you complete the measurement statements. Circle the words that make each statement true.

Susie is taller than Donnie.

Jason is taller than Susie.

Donnie is (**taller than** / **shorter than**) Jason.

> First I draw Susie and Donnie. Then I draw Jason. Since Donnie is shorter than Susie, and Susie is shorter than Jason, Donnie is also shorter than Jason!

EUREKA MATH   Lesson 2:   Compare length using indirect comparison by finding objects *longer than, shorter than,* and *equal in length to* that of a string.   5

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G1-M3-Lesson 3

1. The string that measures the path from the doll house to the park is longer than the path between the park and the store. Circle the shorter path.
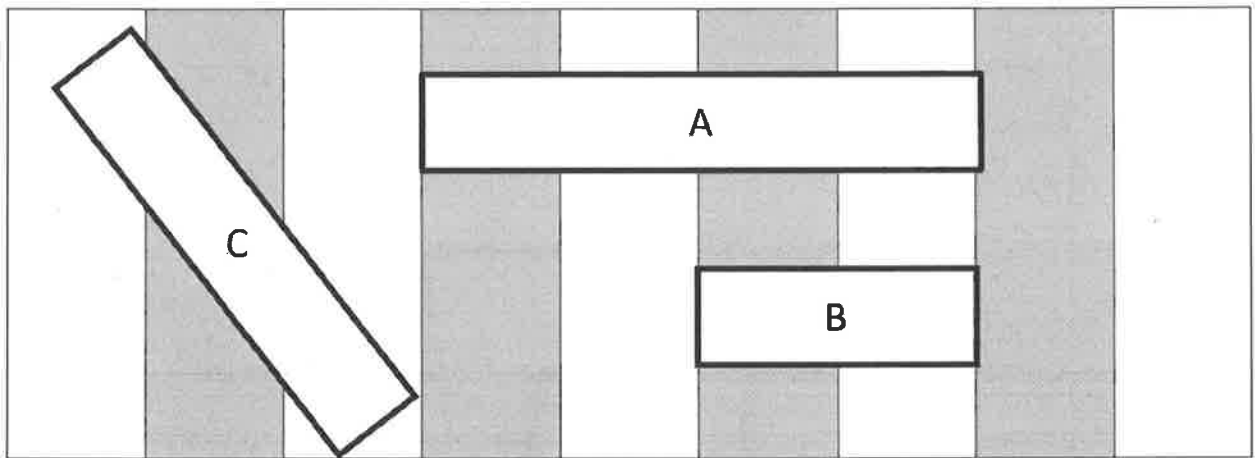
the doll house to the park

the park to the store

If the string is longer, then the path is also longer!

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Use the picture to answer the questions about the rectangles.

2.   Which is the shortest rectangle? _Rectangle B_

3.   If Rectangle A is longer than Rectangle C, the longest rectangle is _Rectangle A_

4.   Order the rectangles from shortest to longest:

   _____B_____   _____C_____   _____A_____

> I can see that Rectangle B is the shortest, and it says that Rectangle A is longer than Rectangle C, so the order must be B, C, A!

Use the picture to answer the questions about the students' paths to school.

5. How long is Caitlyn's path to school? ____**10**____ blocks

6. How long is Toby's path to school? ____**12**____ blocks

7. Joe's path is shorter than Caitlyn's. Draw Joe's path.

> Caitlyn's path is 10 blocks, so Joe's path has to be 9 blocks or less. I just made a straight line for Joe's path, and that makes it 8 blocks!

Circle the correct word to make the statement true.

8. Toby's path is (**longer**/shorter) than Joe's path.

> Joe's path is the shortest. It is just 8 blocks straight to school with no turns. Toby's path is 12 blocks. 12 blocks is a longer walk than 8 blocks.

9. Who took the shortest path to school? ___*Joe*___

10. Order the paths from shortest to longest.

_____*Joe*_____   _____*Caitlyn*_____   _____*Toby*_____

G1-M3-Lesson 4

Measure the length of the picture with your cubes. Complete the statement below.

1. The pencil is __3__ centimeter cubes long.

I can measure the pencil with my centimeter cubes. I have to line up the end points and make sure there is no space between each cube.
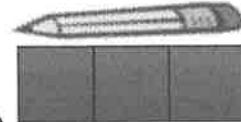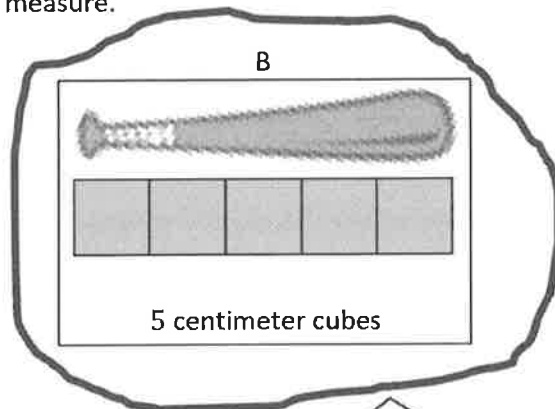
I start at the tip of the pencil and use enough cubes to go all the way to the eraser.

2. Circle the picture that shows the correct way to measure.

A

3 centimeter cubes
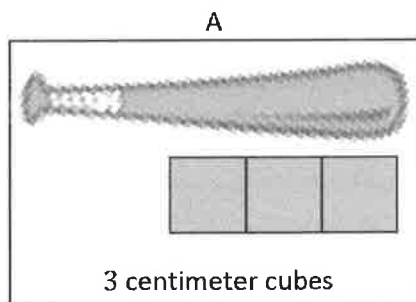
This isn't right! There are no cubes near the handle of the bat!
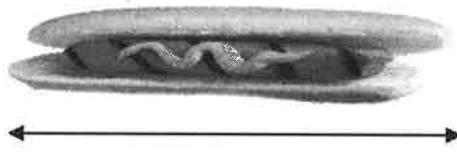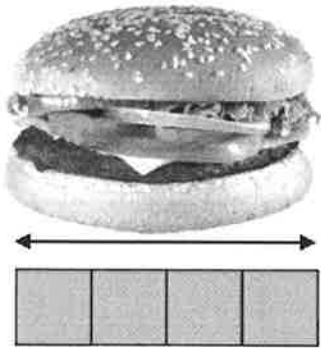
B

5 centimeter cubes

This looks much better. The cubes start at the endpoint and go all the way across with no spaces in between.

3. Explain what is wrong with the measurements for the picture you did NOT circle.

The picture that shows a measurement of 3 cubes is wrong because the cubes don't go all the way across the bat. The cubes don't start at the endpoint or end at the endpoint. There are not enough cubes!

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Lesson 4:   Express the length of an object using centimeter cubes as length units to measure with no gaps or overlaps.

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G1-M3-Lesson 5

1. Use centimeter cubes to measure the pictures below. Complete the sentences.

> I can measure these pictures accurately as long as I line up the endpoints and don't leave any gaps or overlaps with my centimeter cubes.

> Each of my cubes is one centimeter long.

a. The hamburger picture is __4__ centimeters long.

b. The hot dog picture is __6__ centimeters long.

c. The bread picture is __5__ centimeters long.

> The bread picture measured 5 centimeter cubes long. That makes it 5 centimeters long.

Lesson 5: Rename and measure with centimeter cubes, using their standard unit name of centimeters.

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2. Use the picture measurements to order the hamburger picture, hot dog picture, and bread picture from longest to shortest. You can use drawings or names to order the pictures.

Longest	⟶	Shortest
hot dog picture	*bread picture*	*hamburger picture*

The hot dog picture is the longest; it's 6 centimeters long. The hamburger picture is the shortest since it's only 4 centimeters long. That means the bread picture goes in the middle.

3. Fill in the blanks to make the statements true. (There may be more than one correct answer.)

a. The hot dog picture is longer than the ___*bread*___ picture.

b. The bread picture is longer than the ___*hamburger*___ picture and shorter than the ___*hot dog*___ picture.

c. If a banana picture is added that is longer than the bread picture, it will also be longer than which of the other pictures? ___*hamburger*___

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Lesson 5:   Rename and measure with centimeter cubes, using their standard unit name of centimeters.

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G1-M3-Lesson 6

1. Order the bugs from longest to shortest by writing the bug names on the lines. Use centimeter cubes to check your answer. Write the length of each bug in the space to the right of the pictures.
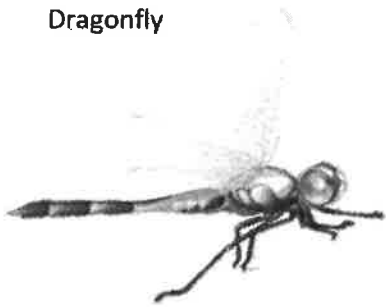
   The bugs from longest to shortest are

   _____Caterpillar_____   _____Dragonfly_____   _____Bee_____

   Dragonfly

   _5_ centimeters

   > The caterpillar is the longest bug.
   > The caterpillar is 7 centimeters long!

   Caterpillar

   _7_ centimeters

   > The bee is the shortest bug. The bee is only 4 centimeters long!

   Bee

   _4_ centimeters

Lesson 6:   Order, measure, and compare the length of objects before and after measuring with centimeter cubes, solving *compare with difference unknown* word problems.

EUREKA MATH

2. Use all of the bug measurements to complete the sentences.

   a. The fly is longer than the ___*bee*___ and shorter than the _*caterpillar*_ .

   b. The ___*bee*___ is the shortest bug.

   c. If another bug is added that is shorter than the bee, list the bugs that the new bug is also shorter than.

      The new bug will be shorter than the fly and the caterpillar.

      > The bee is the shortest bug, so if a bug is shorter than the bee, it is also shorter than all the other bugs.

3. Tania makes a cube tower that is 3 centimeters taller than Vince's tower. If Vince's tower is 9 centimeters tall, how tall is Tania's tower?

   3 more
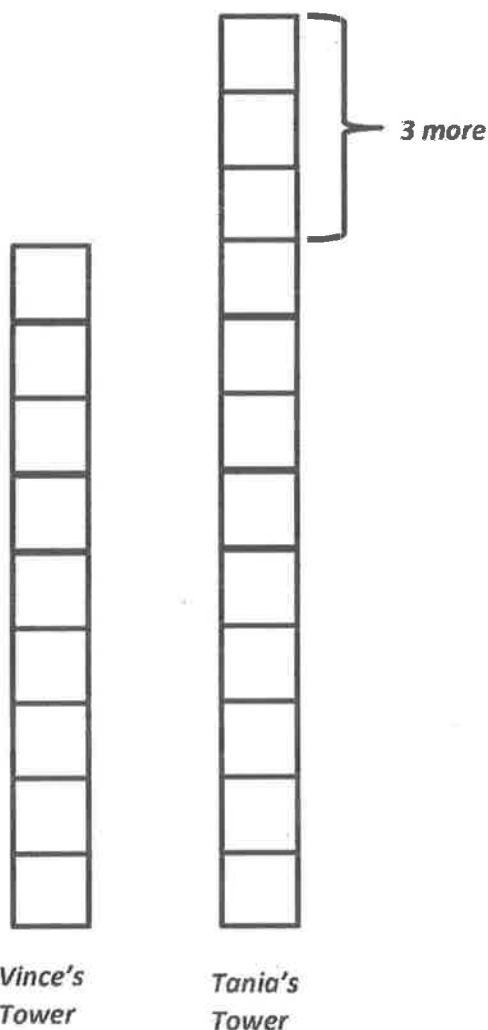
   > To solve, I can use Read, Draw, Write! Now that I have read the problem, what can I draw? I think I can draw the towers! I can start with Vince's tower since I know his is 9 cubes tall.

   > I can write a number sentence to solve. 9 cubes + 3 cubes equals 12 cubes.

   $$9 + 3 = 12$$

   Tania's tower is 12 cubes tall.

   Vince's Tower   *Tania's Tower*

EUREKA MATH   Lesson 6:   Order, measure, and compare the length of objects before and after measuring with centimeter cubes, solving *compare with difference unknown* word problems.   13

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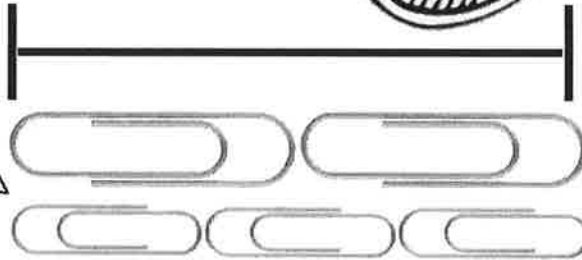G1-M1-HWH-1.3.0-07.2015

G1-M3-Lesson 7

Measure the objects with the large paper clip strip (included with homework paper) and then again with the small paper clip strip (included with homework).

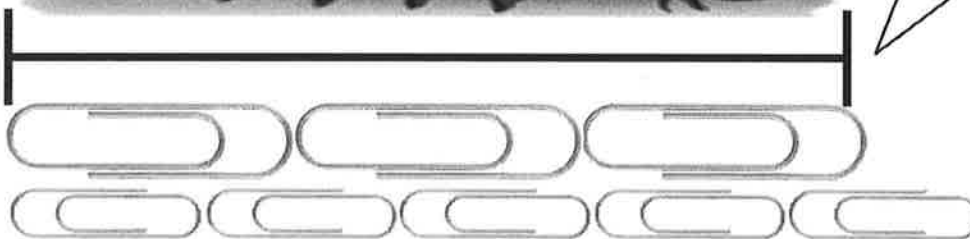Fill in the chart on the back of the page with your measurements.

I need to use the same length unit. I can use all large paper clips or all small paper clips, but I can't mix large paper clips and small paper clips.

I lay the paper clips end to end with no gaps and no overlaps.

The caterpillar is about 5 small paper clips long. It's longer than 4 small paper clips but not exactly as long as 5 small paper clips.

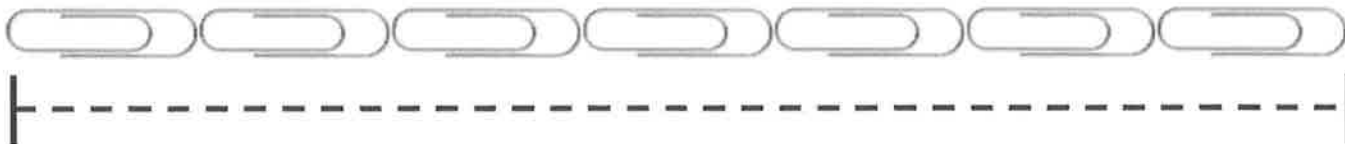**Lesson 7:**   Measure the same objects from Topic B with different non-standard units simultaneously to see the need to measure with a consistent unit.

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Name of Object	Length in Large Paper Clips	Length in Small Paper Clips
a. key	2	3
b. caterpillar	3	5

I knew that the length in small paper clips would be a bigger number. The smaller the length unit, the larger the measurement!

Large paper clip strip.

Small paper clip strip

EUREKA MATH

Lesson 7:   Measure the same objects from Topic B with different non-standard units simultaneously to see the need to measure with a consistent unit.

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G1-M3-Lesson 8

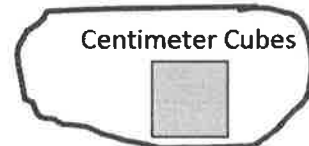1. Circle the length unit you will use to measure. Use the same length unit for all objects.

   Small Paper Clips   Large Paper Clips

                              Toothpicks   Centimeter Cubes

Measure each object listed on the chart, and record the measurement. Add the names of other objects in the classroom, and record their measurements.

Classroom Object	Measurement
a. glue stick	8 centimeter cubes
b. dry erase marker	12 centimeter cubes
c. unsharpened pencil	19 centimeter cubes
d. new crayon	9 centimeter cubes

2. Did you remember to add the name of the length unit after the number? Yes   No

> I have to say centimeter cubes. If not, someone might think I am measuring with some other kind of cube!

Lesson 8:   Understand the need to use the same units when comparing measurement with others.   **EUREKA MATH**

3. Pick 3 items from the chart. List your items from longest to shortest:

a. _____unsharpened pencil_____

b. _____dry erase marker_____

c. _____glue stick_____

> I started with the longest thing I measured, the unsharpened pencil. Then I wrote the shortest one, the glue stick. Then I put the dry erase marker in the middle because it is shorter than the unsharpened pencil but longer than the glue stick.

EUREKA MATH

Lesson 8: Understand the need to use the same units when comparing measurement with others.

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G1-M3-Lesson 9

1. Look at the picture below. How much longer is Guitar A than Guitar B?

Guitar A is __1__ unit(s) **longer** than Guitar B.

> Guitar A is 4 units long. Guitar B is 3 units long. $4 - 3 = 1$, so Guitar A is 1 unit longer.

2. Measure each object with centimeter cubes.

The blue pen is __8 centimeter cubes__.

The yellow pen is __10 centimeter cubes__.

       Lesson 9:   Answer *compare with difference unknown* problems about lengths of two different objects measured in centimeters.   **EUREKA MATH**

3. How much **longer** is the yellow pen than the blue pen?

   The yellow pen is __2__ centimeters longer than the blue pen.

Use your centimeter cubes to model the problem. Then, solve by drawing a picture of your model and writing a number sentence and a statement.

4. Austin wants to make a train that is 13 centimeter cubes long. If his train is already 9 centimeter cubes long, how many more cubes does he need?

| Austin's Train |

9

| ? |

$9 + \boxed{4} = 13$

Austin needs 4 more cubes.

13

| **The Train Austin Wants** |
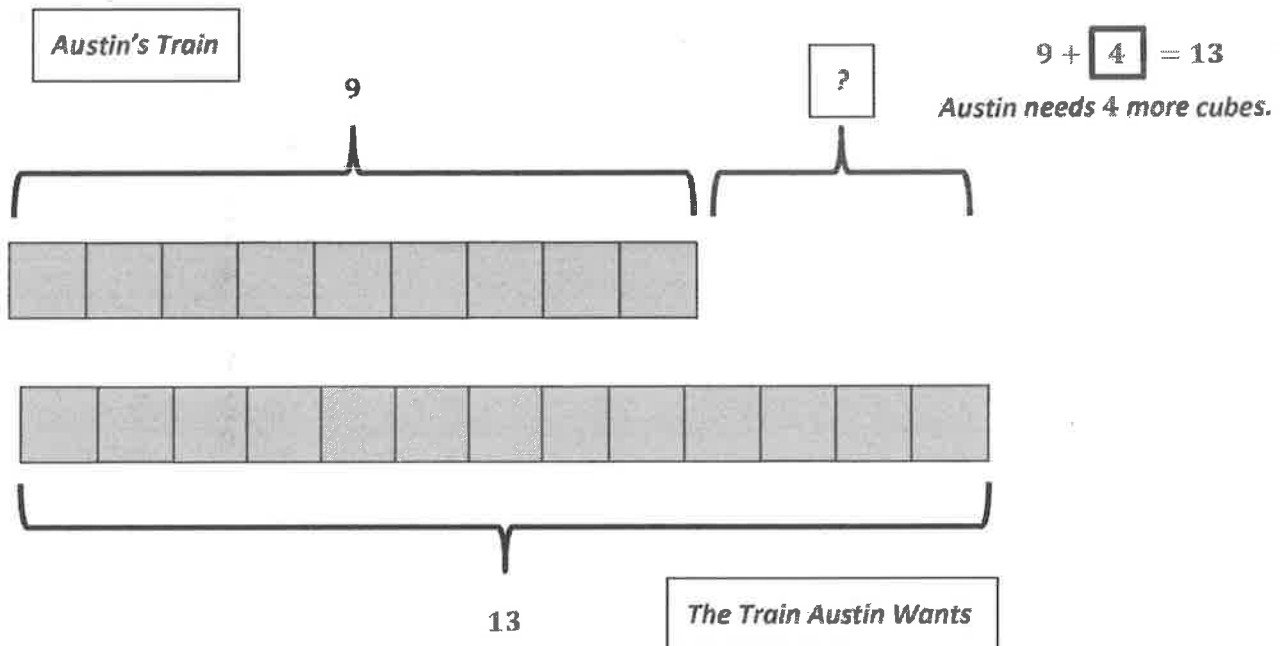
I can use an addition sentence or a subtraction sentence to solve. I can say $13 - 9 = 4$, or I can say $9 + 4 = 13$.

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Lesson 9: Answer *compare with difference unknown* problems about lengths of two different objects measured in centimeters.

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G1-M3-Lesson 10

Students were asked about their favorite kind of fruit. Use the data below to answer the questions.

Ice Cream Flavor	Tally Marks	Votes
Apple	||	2
Strawberry	||||	4
Banana	⊪⊬ |||	8

1. Fill in the blanks in the table by writing the number of students who voted for fruit.

2. How many students chose apple as the fruit they like best?

    __2__ students

> I can solve by adding 2 + 4 since there are 2 students who like apple and 4 students who like strawberry.

3. What is the total number of students who like apple or strawberry the best?

    __6__ students

> By looking at the tally marks, it's easy to see that the least number of people voted for apple.

4. Which fruit received the least amount of votes? _____*apple*_____

5. What is the total number of students who like banana or apple the best?

    __10__ students

> I have to think about which two numbers can make 12. There is a 2, 4, and 8. 4 + 8 = 12 so that means strawberry and banana were liked by 12 students.

6. Which two flavors are liked by a total of 12 students?

    _____*strawberry*_____ and _____*banana*_____

7. Write an addition sentence that shows how many students voted for their favorite fruit.

    _____ $2 + 4 + 8 = 14$ _____

Lesson 10:   Collect, sort, and organize data; then ask and answer questions about
                    the number of data points

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8. A group of people were asked to say their favorite color. Organize the data using tally marks, and answer the questions.
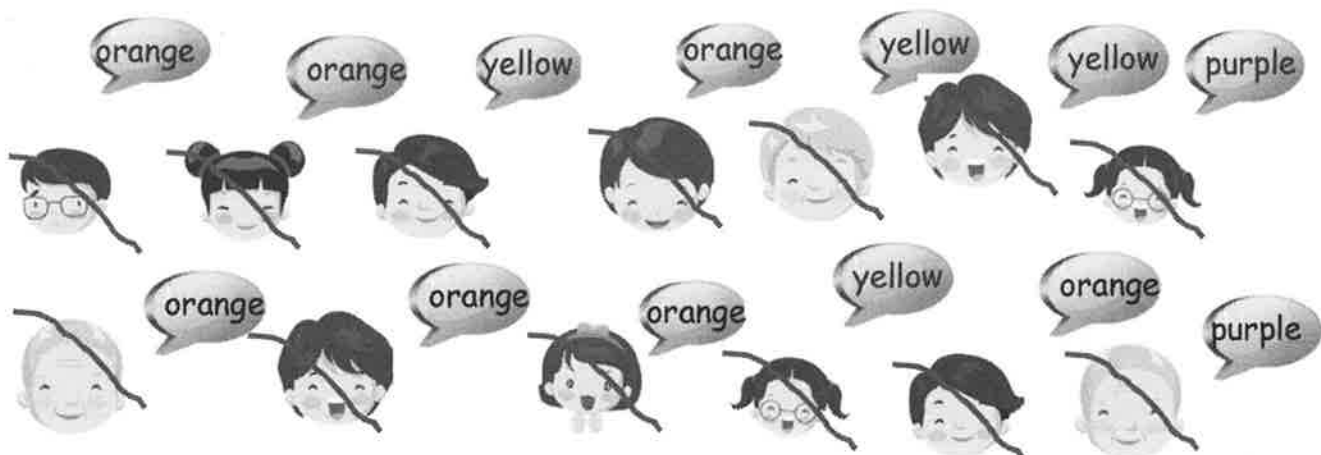
Orange	ⅢⅡ
Yellow	‖‖
Purple	‖

> I can count each vote and make a tally. It's a little harder than it was in class because I can't see which ones I have counted, so I just cross them off as I count.

9. Which color received the least amount of votes? __purple__

10. How many more people like yellow than purple?
    __2__ students

> I can see that yellow has two more tallies than purple.

11. What is the total number of people who like orange and purple the most?
    __9__ students

> 7 students like orange, and 4 students like yellow. $7 + 4 = 11$.

12. Which two colors did a total of 11 people vote for?
    _____orange_____ and _____yellow_____

13. Write an addition sentence that shows how many people voted for their favorite color.
    _____$7 + 4 + 2 = 13$_____

EUREKA MATH   Lesson 10:   Collect, sort, and organize data; then ask and answer questions about   21
the number of data points.

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G1-M3-Lesson 11

Collect information about the block you live on. Use tally marks or numbers to organize the data in the chart below.
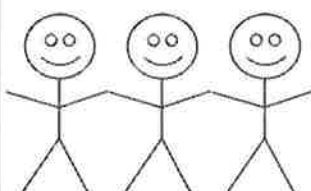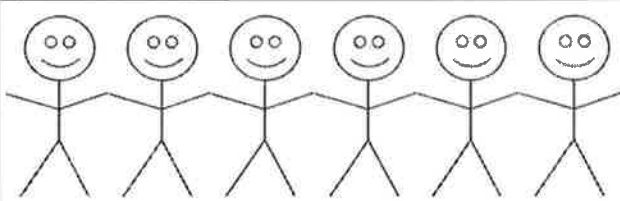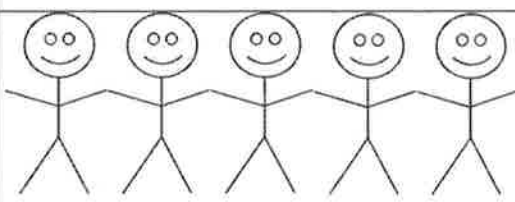
How many brick buildings/houses are on your street?	How many two story buildings/houses are on your street?	How many one story buildings/houses are on your street?	How many grassy lawns are on your street?	How many buildings/houses with a garage are on your street?
‖	‖‖	⦀	⦀ ‖‖	⦀ ‖

- Complete the question sentence frames to ask questions about your data.
- Answer your own questions.

> It's easy to see that the most houses have grassy lawns because there are so many tallies!

1.   How many __grassy lawns__ are there? (Pick the the category that has the **most**.) __9__

2.   How many ____brick buildings____ are there? (Pick the item you have the **least** of.) __2__

3.   **Together**, how many brick houses and houses with garages are there? __8__

4.   Write and answer two more questions using the data you collected.

   a.   _Are there more one story or two story houses_ ? _There are more one story houses._

   b.   _Together, how many one story and two story houses are there_ ? _9_

Lesson 11:   Collect, sort, and organize data; then ask and answer questions about the number of data points.   **EUREKA MATH**

Workers voted on their favorite snack food for the office kitchen. Each worker could only vote once. Answer the questions based on the data in the table.

5. How many workers chose popcorn? __6__ workers

6. How many workers chose fruit or crackers?

   __8__ workers

> 3 workers chose crackers, and 5 chose fruit. $3 + 5 = 8$, so 8 workers chose fruit or crackers.

7. From this data, can you tell how many workers are in this office? Explain your thinking.

   I think there must be 14 workers in the office because I counted each person who voted. There could be more though because what if someone was absent that day or just did not vote?

> I know that $3 + 6 = 9$, and then there are 5 more. $9 + 1 = 10$, and then I add on 4 more, and I get 14.

EUREKA MATH   Lesson 11:   Collect, sort, and organize data; then ask and answer questions about   23
                                  the number of data points.

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G1-M3-Lesson 12

The class has 20 students. 10 students ride their bikes to school, 7 ride the bus, and 3 come in a car. Use squares with no gaps or overlaps to organize the data. Line up your squares carefully.

How Students Came to School   Number of Students   [ ] represents 1 student
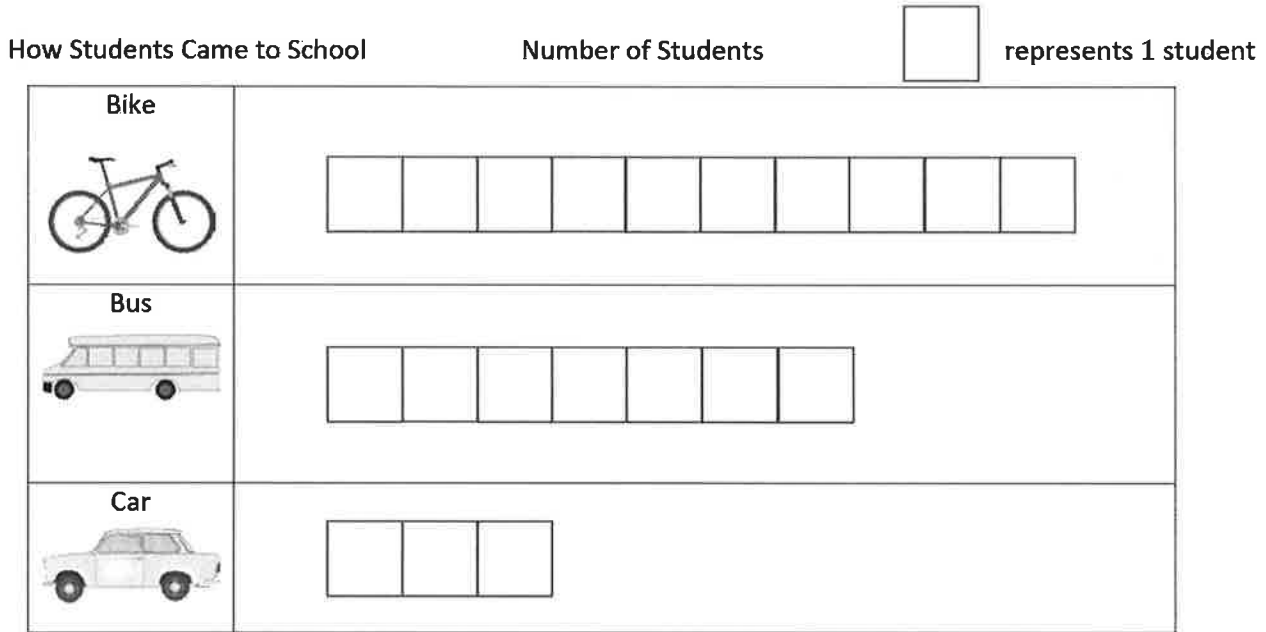
Bike	
Bus	
Car	

I line my squares up carefully with no gaps in between and no overlaps. I started from the same endpoint.

I can look at the number of students that rode a bike and the number of students that rode the bus. I can count how many more students rode a bike. 1, 2, 3 students!

1. How many more students rode a bike than rode the bus? __3__ students

2. Write a number sentence to tell how many students were asked about how they come to school.

    $10 + 7 + 3 = 20$

    I add the number of bike riders, bus riders, and car riders!

3. Write a number sentence to show how many fewer students rode in a car than the bus.

    $7 - 3 = 4$

Lesson 12: Ask and answer varied word problem types about a data set with three categories.

EUREKA MATH

G1-M3-Lesson 13

Use the graph to answer the questions. Fill in the blank, and write a number sentence.

Class Play Audience   😊 represents 1 person

Students	Teachers	Parents
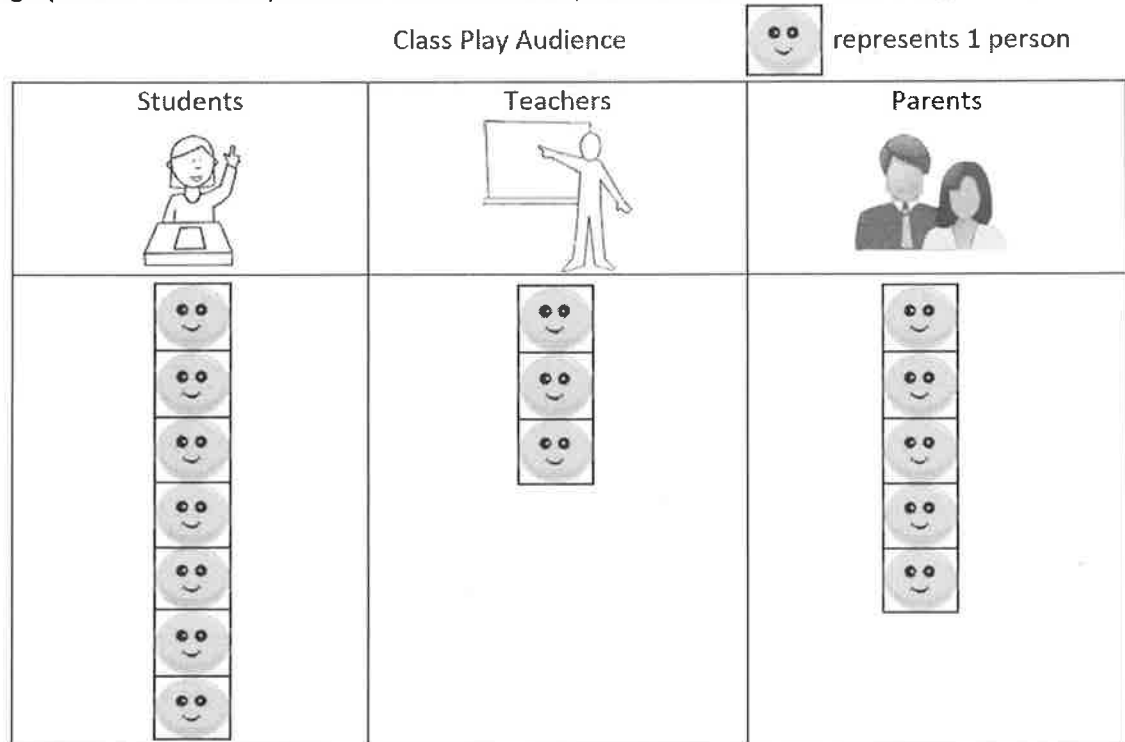
1. How many more students are at the play than teachers? $7 - 3 = 4$

   There are __4__ more students than teachers.

   > I can see which has more and which has less by looking at the squares. I can subtract to find how many more or less.

2. How many fewer parents are at the play than students? $7 - 5 = 2$

   There are __2__ fewer parents.

3. If 2 more teachers attend the play, how many people will be there? $5 + 5 + 7 = 17$

   There will be __17__ people.

   > I can add 2 more teachers to the 3 teachers. This equals 5 teachers. I know 5 teachers and 5 parents equals 10 people. Then I can add the 7 students. $10 + 7 = 17$