OER K–5 Math

EDITION 1

ENGLISH

Grade 1
Module 3

LEARN

ORDERING AND COMPARING LENGTH MEASUREMENTS AS NUMBERS

STUDENT EDITION

Learn

K–5 Math Grade 1 Module 3

ORDERING AND COMPARING LENGTH MEASUREMENTS AS NUMBERS

Acknowledgment

Thank you to all the Texas educators and stakeholders who supported the review process and provided feedback. These materials are the result of the work of numerous individuals, and we are deeply grateful for their contributions.

Notice

These learning resources have been built for Texas students, aligned to the Texas Essential Knowledge and Skills, and are made available pursuant to Chapter 31, Subchapter B-1 of the Texas Education Code.

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Read–Draw–Write (RDW) Process

The K–5 Math materials support students as they problem solve by using a simple, repeatable process introduced by the teacher. The Read–Draw–Write (RDW) process calls for students to

1. Read the problem.
2. Draw and label.
3. Write a number sentence (equation).
4. Write a word sentence (statement).

Families may support the process by encouraging their student to ask themselves questions such as

- What do I see?
- Can I draw something?
- What conclusions can I make from my drawing?

The more students participate in reasoning through problems with this systematic approach, the more they internalize these practices and thought processes.

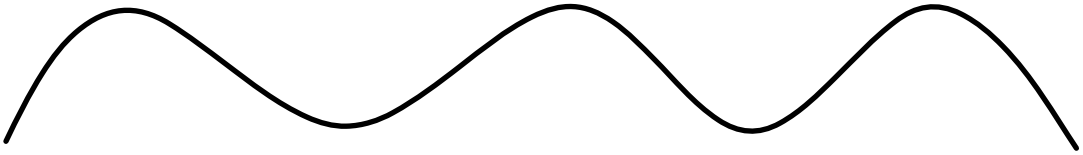
Contents

Module 3: Ordering and Comparing Length Measurements as Numbers

Name _____ Date _____

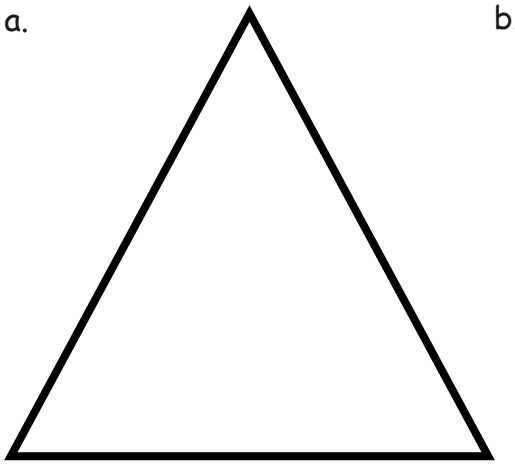
1. With your partner, use yarn to measure each path.
Partner A measures path a. Partner B measures path b.

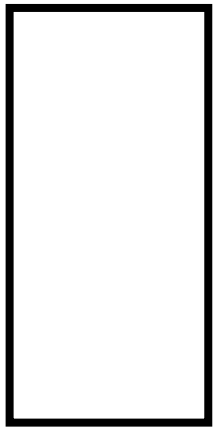
a. _____

b. 

Which path is longer? a b Which path is shorter? a b

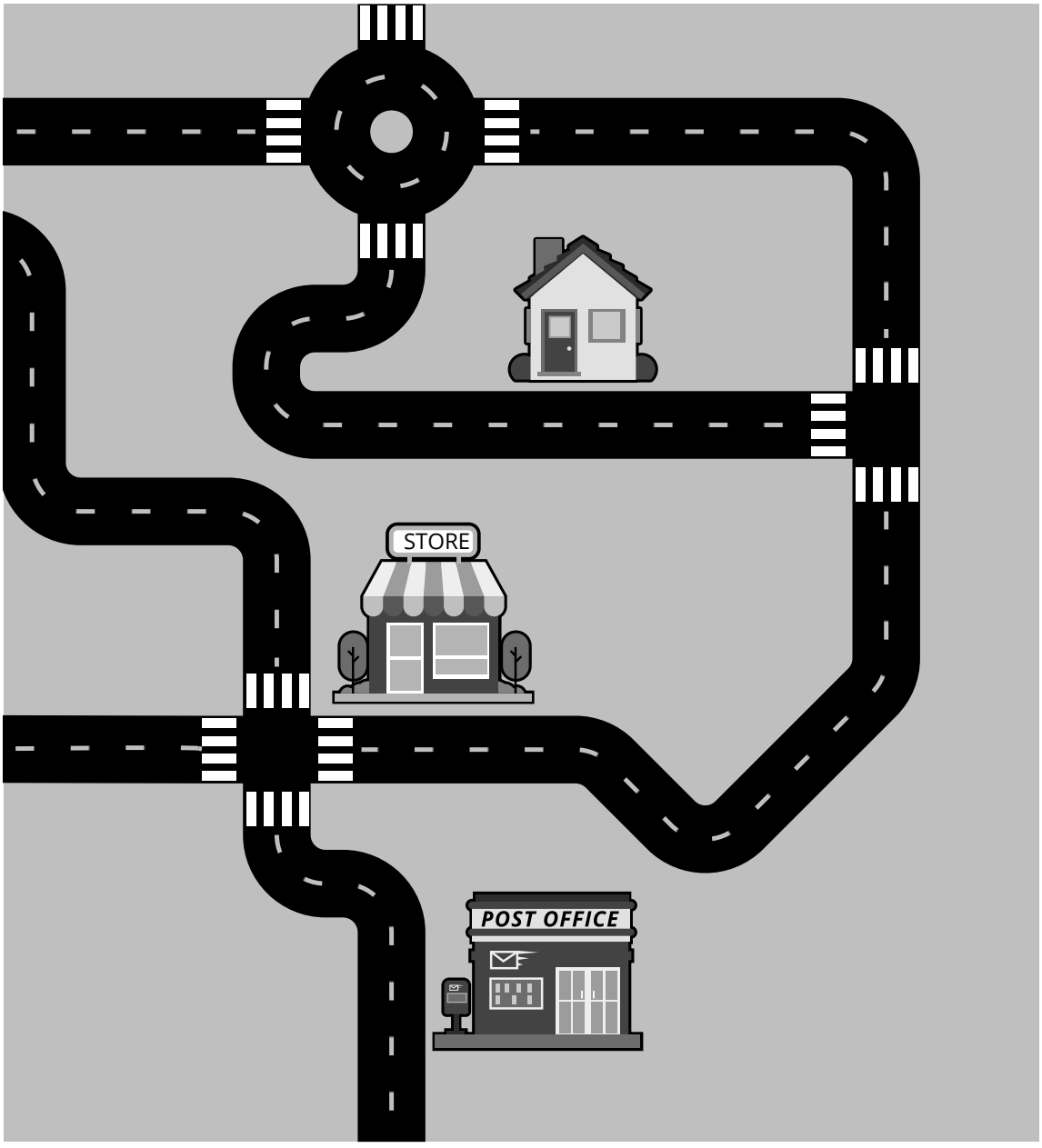
2. With your partner, use yarn to measure the path around each shape
Partner A measures shape a. Partner B measures shape b.

a. 

b. 

Which path is longer? a b Which path is shorter? a b

3. With your partner, use yarn to measure each path.
Partner A measures the path from the house to the post office.
Partner B measures the path from the house to the store.

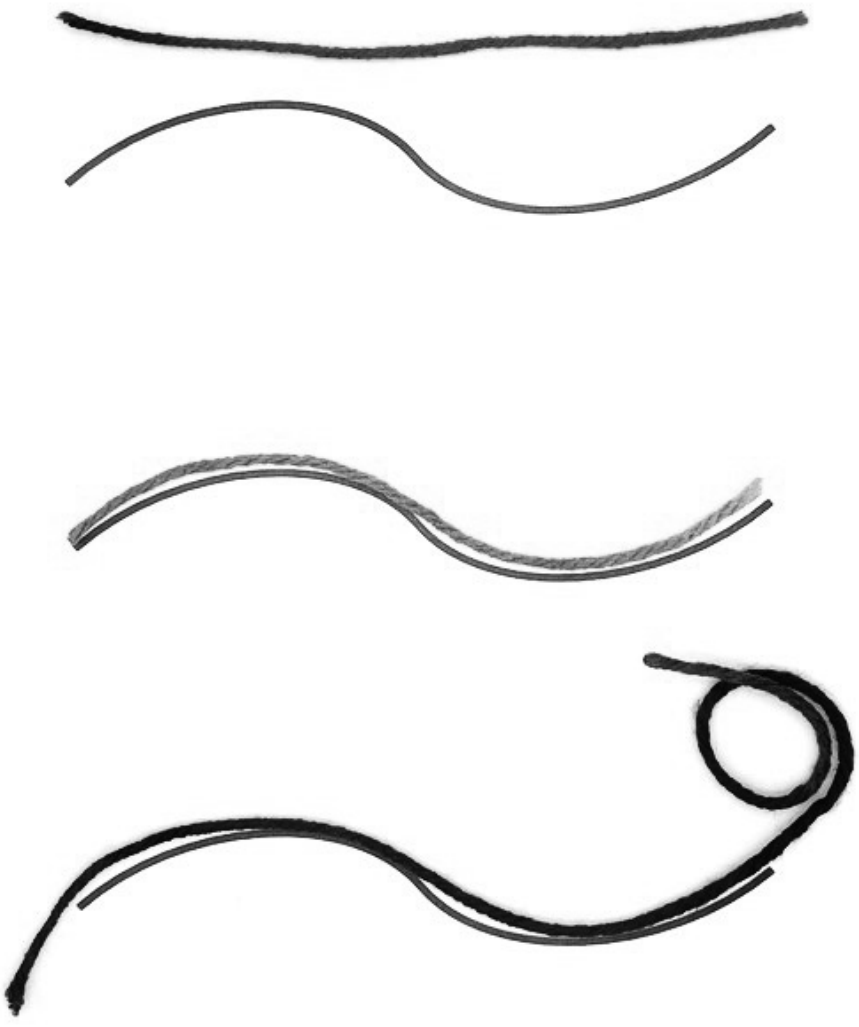


Which path is longer? house to post office house to store

Which path is shorter? house to post office house to store

Name _____ Date _____

Circle the path that has been measured correctly with the string. Tell how you know.



_____

_____

_____

Read

Jim wants to measure the length of a school bus. What measuring tool should Jim use? Why?

string

meter stick

centimeter cube

Write

What measuring tool should Jim use? Why?

Name _____ Date _____

Measure the length of each picture with your cubes. Complete the statements below.

1. The pencil is _____ centimeter cubes long.

2. The pan is _____ centimeter cubes long.

3. The shoe is _____ centimeter cubes long.

4. The bottle is _____ centimeter cubes long.

5. The paintbrush is _____ centimeter cubes long.

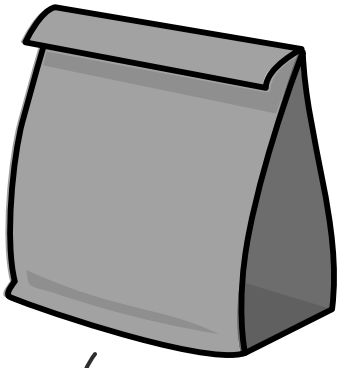
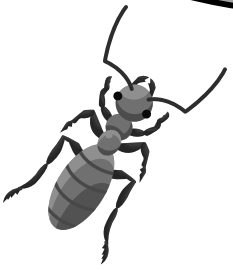
6. The bag is _____ centimeter cubes long.

7. The ant is _____ centimeter cubes long.

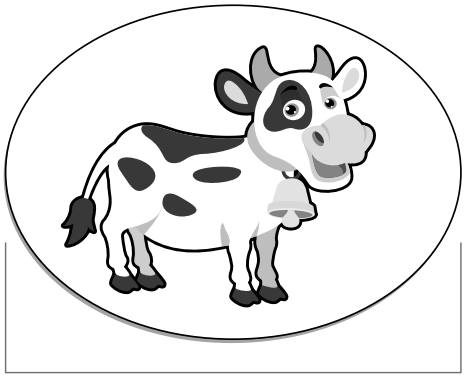
8. The cupcake is _____ centimeter cubes long.





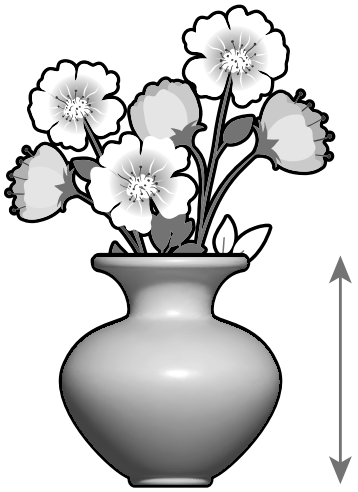





9.



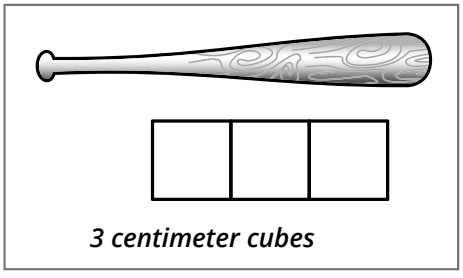
The cow sticker is _____ centimeter cubes long.

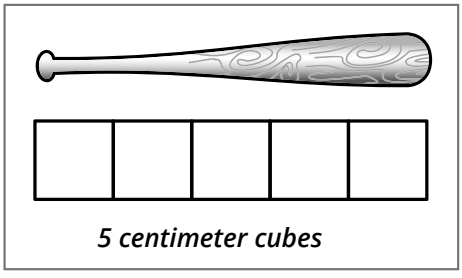
10.



The vase is _____ centimeter cubes long.

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

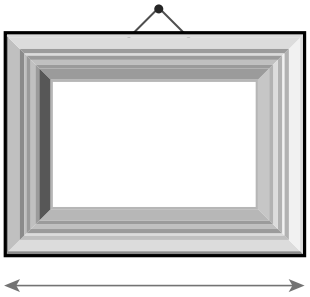




12. How would you fix the picture that shows an incorrect measurement?

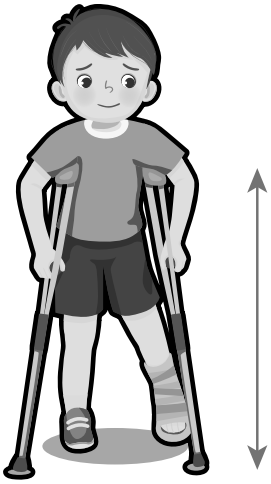
Name _____ Date _____

1.



The picture frame is about _____ centimeter cubes long.

2.



The boy's *crutch* is about _____ centimeter cubes long.

Name _____ Date _____

Classroom Objects	Length Using Centimeter Cubes
glue stick 	_____ centimeter cubes long
dry erase marker 	_____ centimeter cubes long
craft stick 	_____ centimeter cubes long
paper clip 	_____ centimeter cubes long
	_____ centimeter cubes long
	_____ centimeter cubes long
	_____ centimeter cubes long

measurement recording sheet

Read

Mai used centimeter cubes to measure the length of her book.

She used 8 yellow centimeter cubes and 4 red centimeter cubes.

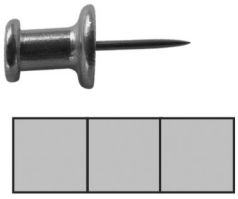
How many centimeter cubes long was her book?

Draw

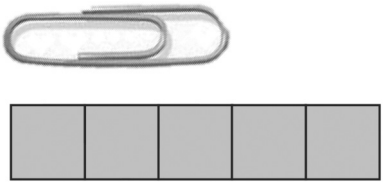
Write

Name _____ Date _____

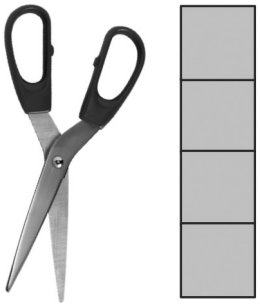
1. Circle the object(s) that are measured correctly.

a. 

3 centimeters long

b. 

5 centimeters long

c. 

4 centimeters long

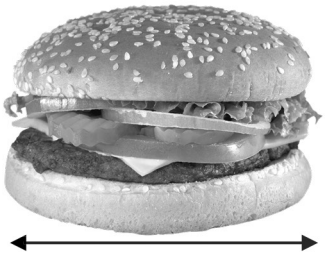
2. Measure the paper clip in 1(b) with your cubes. Then, check the cubes with your centimeter ruler.

The paper clip is _____ centimeter cubes long.

The paper clip is _____ centimeters long.

Be ready to explain why these are the same or different during the Debrief!

3. Use centimeter cubes to measure the length of each picture from left to right. Complete the statement about the length of each picture in centimeters.



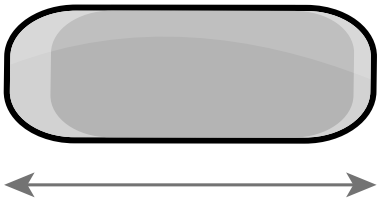
a. The hamburger picture is _____ centimeters long.

b. The hot dog picture is _____ centimeters long.

c. The bread picture is _____ centimeters long.

4. Use centimeter cubes to measure the objects below. Fill in the length of each object.

a.

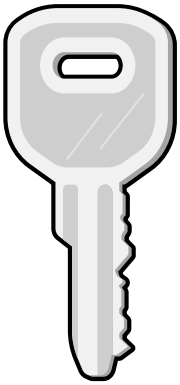


The eraser is about _____ centimeters long.

b.

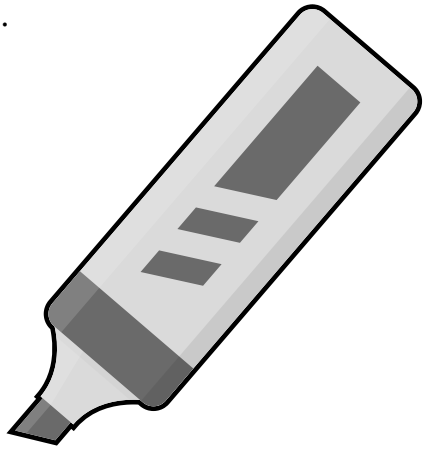
The hair clip is about _____ centimeters long.

c.



The key is about _____ centimeters long.

d.



The marker is about _____ centimeters long.

5. The eraser is longer than the _____, but it is shorter than the _____.

6. Circle the word that makes the sentence true.

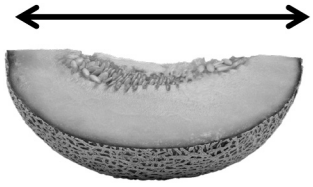
   If a paper clip is shorter than the key, then the marker is **longer/shorter** than the paper clip.

Name _____ Date _____

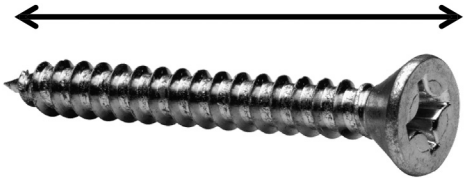
Use the centimeter cubes to measure the items. Complete the sentences.

1. The water bottle is about _____ centimeters tall.

2. The melon is about _____ centimeters long.



3. The screw is about _____ centimeters long.



4. The umbrella is about _____ centimeters tall.

Read

Julia's lollipop is 15 centimeters long. She measured the lollipop with 9 red centimeter cubes and some blue centimeter cubes. How many blue centimeter cubes did she use? Remember to use the RDW process.

Draw

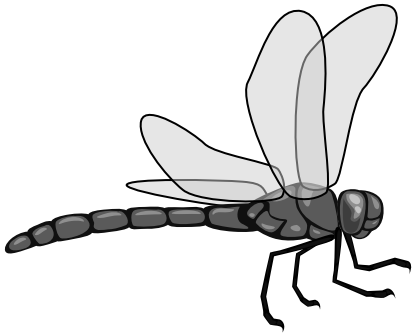
Name _____ Date _____

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

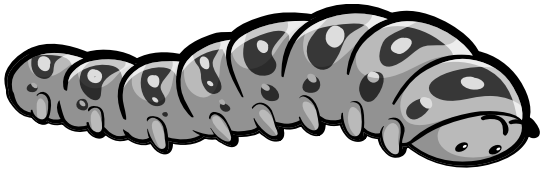
   _____ _____ _____

Dragonfly



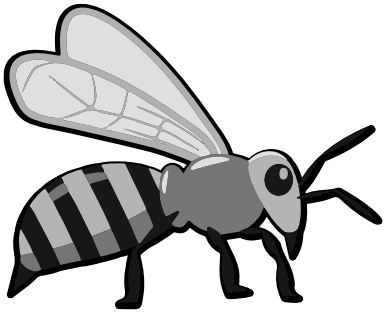
____ centimeters

Caterpillar



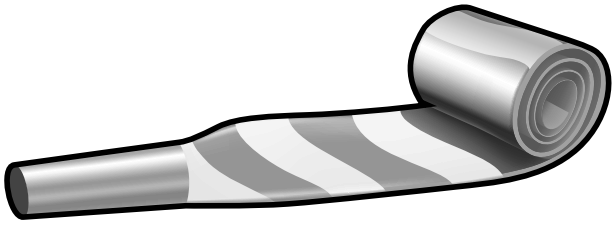
____ centimeters

Bee

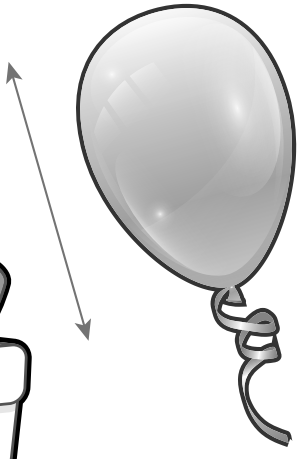


____ centimeters

2. Order the objects below from shortest to longest using the numbers 1, 2, and 3. Use your centimeter cubes to check your answers, and then complete the sentences for problems d, e, f, and g.



a. The noise maker: _____



b. The balloon: _____

c. The present: _____

d. The present is about _____ centimeters long.

e. The noise maker is about _____ centimeters long.

f. The balloon is about _____ centimeters long.

g. The noise maker is about _____ centimeters longer than the present.

Use your centimeter cubes to model each length, and answer the question. Write a statement for your answer.

3. Peter's toy T. rex is 11 centimeters tall, and his toy Velociraptor is 6 centimeters tall. How much taller is the T. rex than the Velociraptor?

4. Miguel's pencil rolled 17 centimeters, and Sonya's pencil rolled 9 centimeters. How much less did Sonya's pencil roll than Miguel's?

5. 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?

Name _____ Date _____

Read the measurements of the tool pictures.

The wrench is 8 centimeters long.

The screwdriver is 12 centimeters long.

The hammer is 9 centimeters long.

1. Order the pictures of the tools from shortest to longest.

_____ _____ _____

2. How much longer is the screwdriver than the wrench?

The screwdriver is _____ centimeters longer than the wrench.

Read

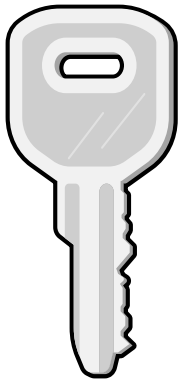
When Corey measures his new pencil, he uses 19 centimeter cubes. After he sharpens the pencil, he needs 4 fewer centimeter cubes. How long is Corey's pencil after he sharpens it? Use centimeter cubes to solve the problem. Write a number sentence and a statement to answer the question.

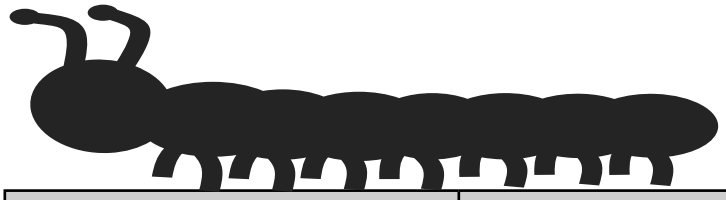
Draw

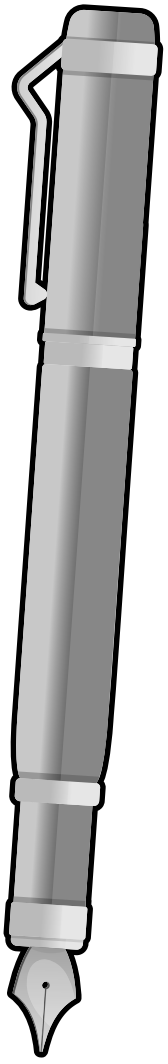
Write

Name _____ Date _____

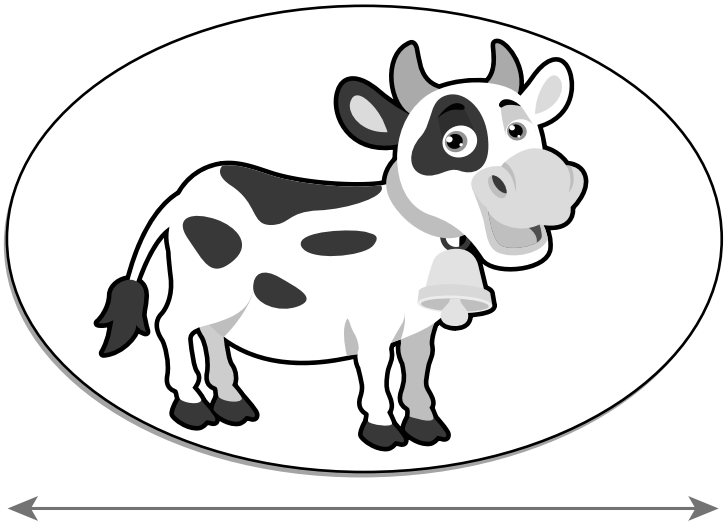
1. Measure the length of each object with **large** paper clips. Fill in the chart with your measurements.



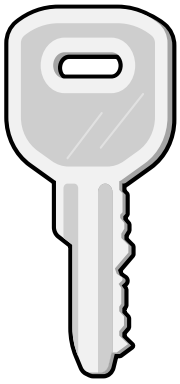


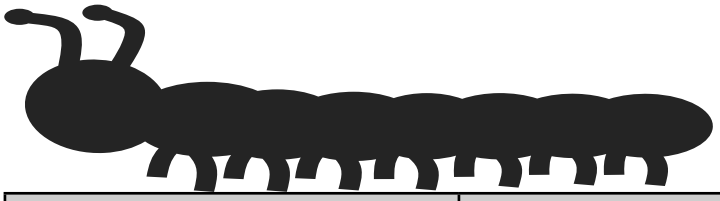


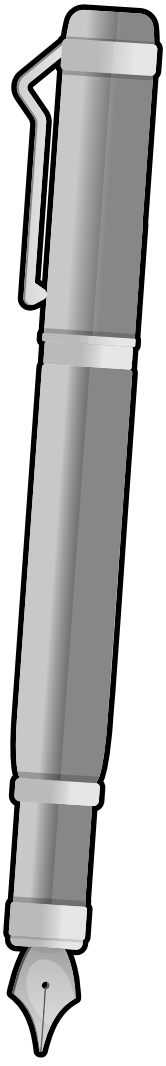
Name of Object	Number of Large Paper Clips
a. glue bottle	
b. caterpillar	
c. key	
d. pen	
e. cow sticker	
f. Problem Set paper	
g. reading book (from classroom)	



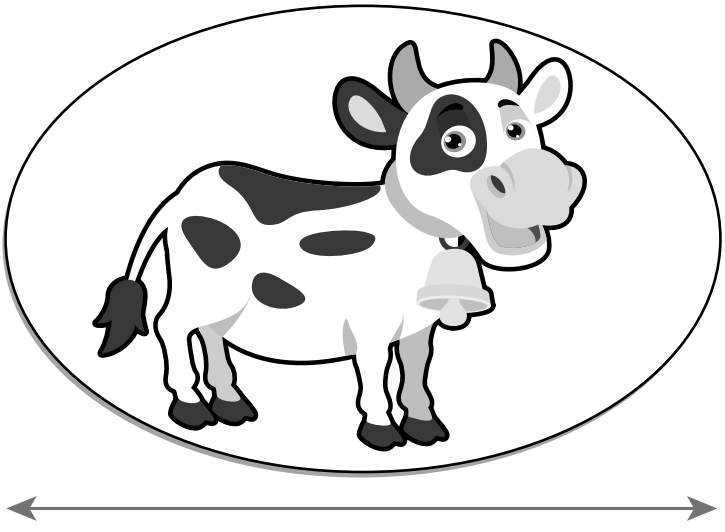
2. Measure the length of each object with **small** paper clips. Fill in the chart with your measurements.







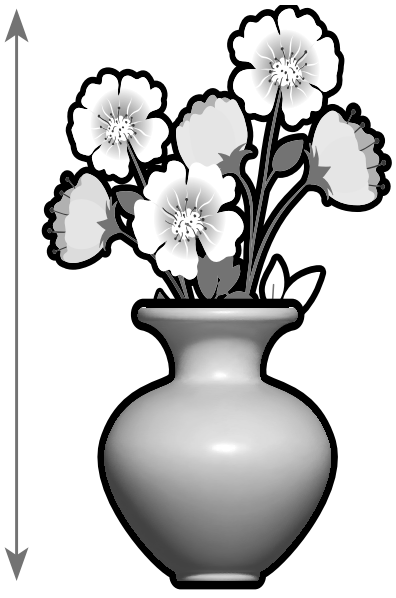
Name of Object	Number of Small Paper Clips
a. glue bottle	
b. caterpillar	
c. key	
d. pen	
e. cow sticker	
f. Problem Set paper	
g. reading book (from classroom)	

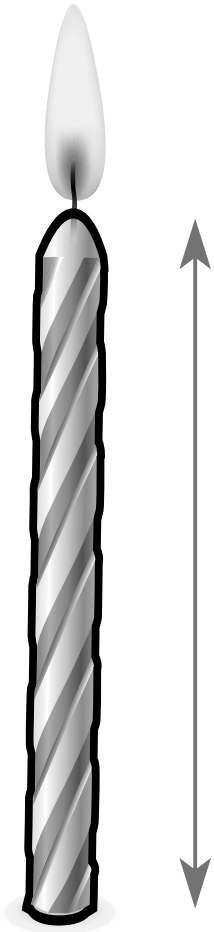


Name _____ Date _____

Measure the length of each object with **large** paper clips. Then, measure the length of each object with **small** paper clips. Fill in the chart with your measurements.

Name of Object	Number of Large Paper Clips	Number of Small Paper Clips
a. bow		
b. candle		
c. vase and flowers		





Read

I have 2 crayons. Each crayon is 9 centimeter cubes long. I also have a paintbrush. The paintbrush is the same length as 2 crayons. How many centimeter cubes long is the paintbrush? Use centimeter cubes to solve the problem. Then, draw a picture, and write a number sentence and a statement to answer the question.

Draw

Write

Name _____ Date _____

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. Find some other items to measure. Add the names of those objects to the chart, and record their measurements.

Classroom Object	Measurement
a. glue stick	
b. dry erase marker	
c. unsharpened pencil	
d. personal white board	
e.	
f.	
g.	

Name _____ Date _____

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

Choose two objects in your desk that you would like to measure. Measure each object, and record the measurement.

Classroom Object	Measurement
a.	
b.	

Read

Corey buys a super-cool, extra-long crayon that is 14 centimeters long. His regular crayon is 9 centimeters long. Use centimeter cubes to find out how much longer Corey's new crayon is than his regular crayon.

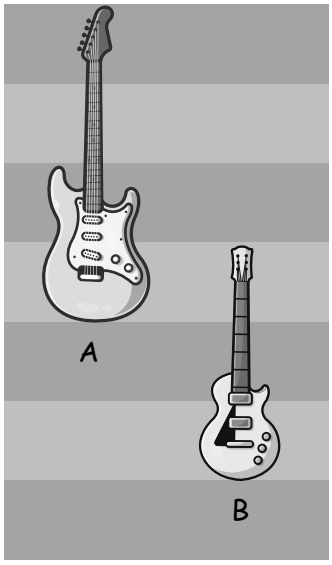
Write a statement to answer the question. Write a number sentence to show what you did.

Draw

Write

Name _____ Date _____

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



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

2. Measure each object with centimeter cubes.

The blue pen is _____ _____.

The yellow pen is _____ _____.

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

   The yellow pen is _____ centimeters **longer** than the blue pen.

4. How much **shorter** is the blue pen than the yellow pen?

   The blue pen is _____ centimeters **shorter** than the yellow pen.

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

5. Vinh 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?

6. Kea's boat is 12 centimeters long, and Megan's boat is 8 centimeters long. How much **shorter** is Megan's boat than Kea's boat?

7. Kim cuts a piece of ribbon for her mom that is 14 centimeters long. Her mom says the ribbon is 8 centimeters too long. How **long** should the ribbon be?

8. The tail of Lee's dog is 15 centimeters long. If the tail of Kit's dog is 9 centimeters long, how much **longer** is the tail of Lee's dog than the tail of Kit's dog?

Name _____ Date _____

Use your centimeter cubes to model the problem. Then, draw a picture of your model.

Mona's hair is 7 centimeters long. Claire's hair is 15 centimeters long. How much **shorter** is Mona's hair than Claire's hair?

Read

A first grade teacher needs a story problem about bluebonnets to match this drawing and number sentence. Help her by writing a story problem that matches both. Make sure to answer the question you write in your story problem!

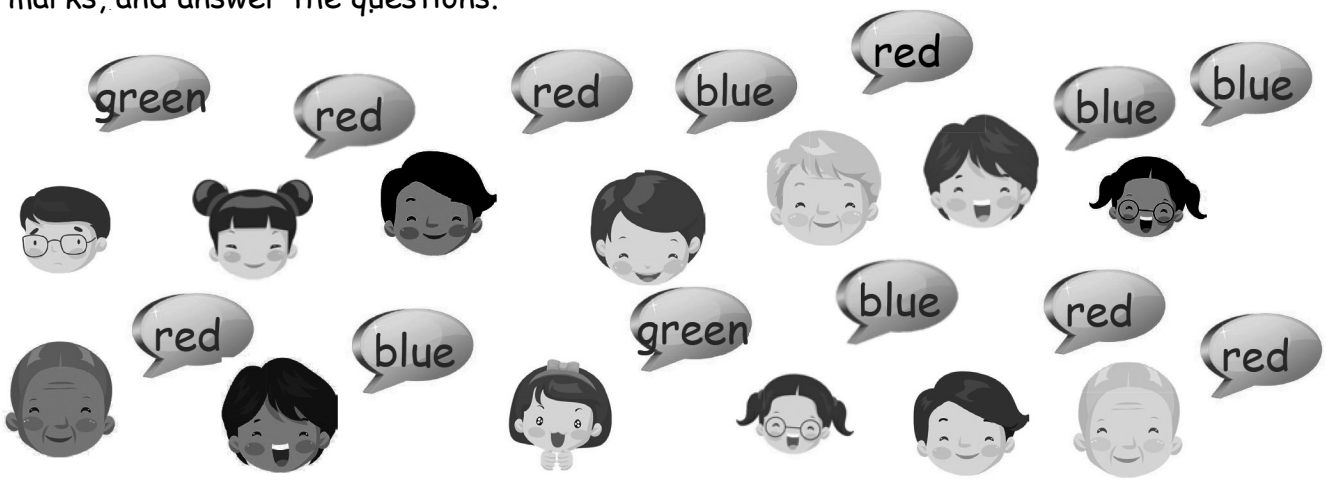
$13 - 5 = \square$

Draw

Write

Name _____ Date _____

A group of people were asked to say their favorite color. Organize the data using tally marks, and answer the questions.



Red	
Green	
Blue	

1. How many people chose red as their favorite color? _____ people like red.

2. How many people chose blue as their favorite color? _____ people like blue.

3. How many people chose green as their favorite color? _____ people like green.

4. Which color received the least amount of votes? _____

5. Write a number sentence that tells the total number of people who were asked their favorite color.

_____

Name _____ Date _____

A group of students were asked what they ate for lunch. Use the data below to answer the following questions.

Student Lunches

Lunch	Number of Students
sandwich	3
salad	5
pizza	4

1. What is the **total** number of students who ate pizza? _____ student(s)

2. Which lunch was eaten by the **greatest** number of students? _____

3. What is the total number of students who ate pizza or a sandwich?_____ student(s)

4. Write an addition sentence for the **total** number of students who were asked what they ate for lunch.

_____

Read

Nam asked his friends whether dogs or cats are friendlier. 9 of his friends think dogs are friendlier, and 6 think cats are friendlier. Make a table to show Nam's data collection. How many friends did he ask?

Draw

Write

Name _____ Date _____

Welcome to Data Day! Follow the directions to **collect** and **organize** data. Then, **ask** and **answer questions** about the data.

- Choose a question. Circle your choice.
- Pick 3 answer choices.
- Ask your classmates the question, and show them the 3 choices. Record the data on a class list.
- Organize the data in the chart below.

Which fruit do you like best?	Which snack do you like best?	What do you like to do on the playground the most?	Which school subject do you like the best?	Which animal would you most like to be?

Answer Choices	Number of Students

- Complete the question sentence frames to ask questions about your data.
- Trade papers with a partner, and have your partner answer your questions.

1. How many students liked _____ the best?

2. Which category received the fewest votes? _____

3. How many more students liked _____ than _____?

4. What is the total number of students who liked _____ or _____ the best?

5. How many students answered the question? How do you know?

Name _____ Date _____

A class collected the information in the chart below. Students asked each other: Among stuffed animals, toy cars, and blocks, which is your favorite toy?

Then, they organized the information in this chart.

Toy	Number of Students
Stuffed Animals	11
Toy Cars	5
Blocks	13

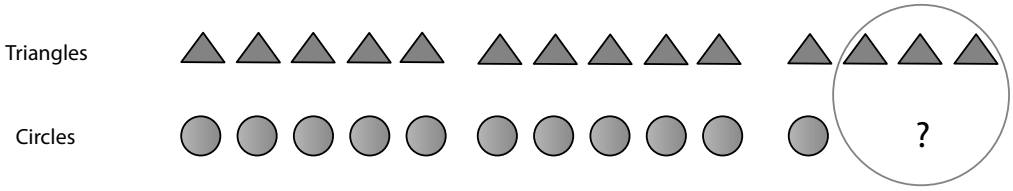
1. How many students chose toy cars? _____

2. How many more students chose blocks than stuffed animals? _____

3. How many students would need to choose toy cars to equal the number of students who chose blocks? _____

Read

A first grade teacher needs a story problem about shapes to match this drawing and number sentence. Help him by writing a story problem that matches both. Make sure to answer the question you write in your story problem!



14 - 11 = ☐

Draw

Write

Name _____ Date _____

Each friend picked a picture to represent their favorite ice cream flavor. Cut out their pictures and glue them to the picture graph. Line up your data carefully. Make sure there are no gaps or overlaps as you organize your data.

Favorite Ice Cream Flavors

Number of Students

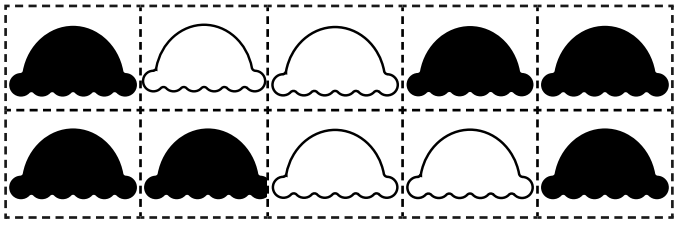
Flavors	
Vanilla 	
Chocolate 	

 = 1 vote

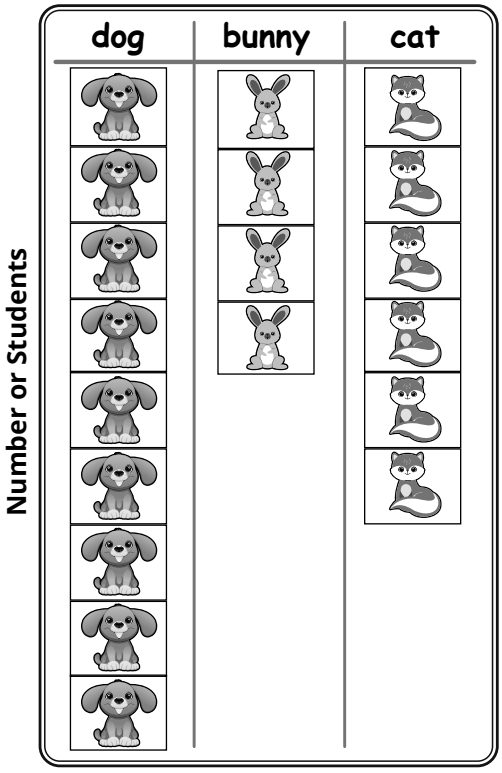
1. How many **more** students liked chocolate than liked vanilla? _____ students
2. How many **total** students voted for their favorite ice cream flavor?
   _____ students
3. What is another question we can ask about this picture graph? Write the question and its answer.

_____

_____



Each student in the class placed a picture on the graph to show his or her favorite kind of pet. Use the picture graph to answer the questions.



Each picture = 1 student vote

4. How many students chose dogs **or** cats as their favorite pet?
   _____ students

5. How many more students chose dogs as their favorite pet than cats?
   _____ students

6. If the teacher asked a question about this picture graph and you correctly answered "2," what question might the teacher have asked?

Name _____ Date _____

Each student in the class selected a picture to vote for their favorite zoo animal. Glue their pictures into the graph with no gaps or overlaps. Then answer the questions.

Favorite Zoo Animals

Number of Students

Zoo Animals

giraffe	
elephant	
lion	

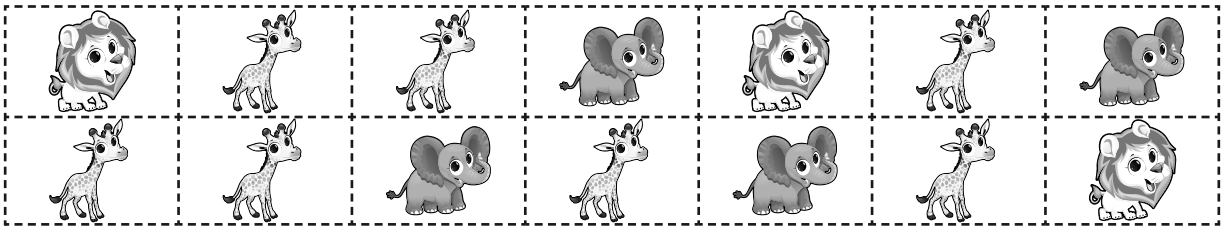
Each picture = 1 student vote

1. How many total students voted for their favorite zoo animal? _____ students

2. How many **fewer** students like lions than like giraffes? Write a number sentence to show your answer. _____

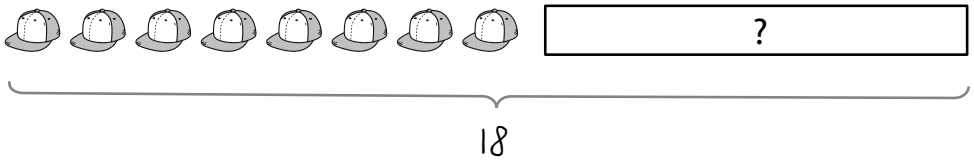
3. If the teacher asked a question about this picture graph and you correctly answered "3," what question might the teacher have asked?

_____



Read

A first grade teacher needs a story problem to match this drawing and number sentence. Help her by writing a story problem that matches both. Make sure to answer the question you write in your story problem!



$8 + \square = 18$

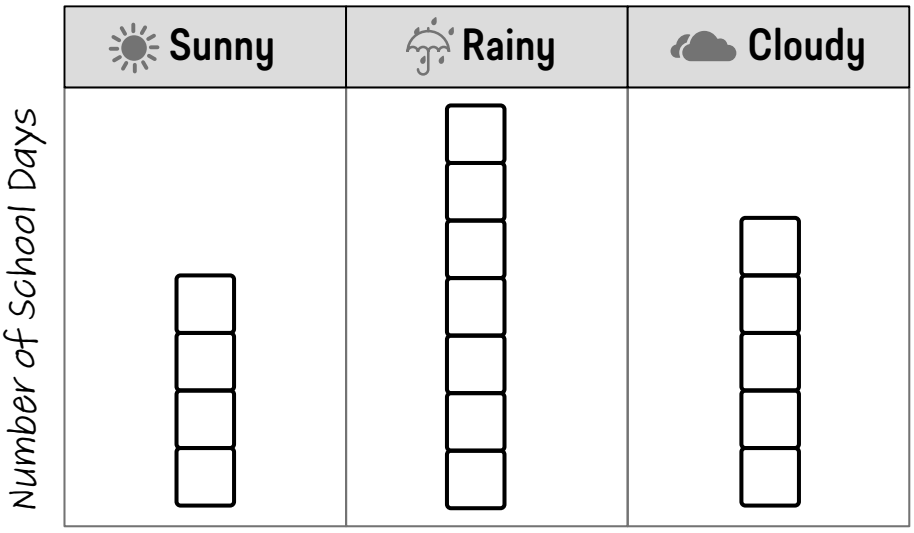
Draw

Write

Name _____ Date _____

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

School Day Weather ☐ = 1 day



1. How many more days were cloudy than sunny?

   _____ more day(s) were cloudy than sunny. _____

2. How many fewer days were cloudy than rainy?

   _____ fewer day(s) were cloudy than rainy. _____

3. How many more days were rainy than sunny?

   _____ more day(s) were rainy than sunny. _____

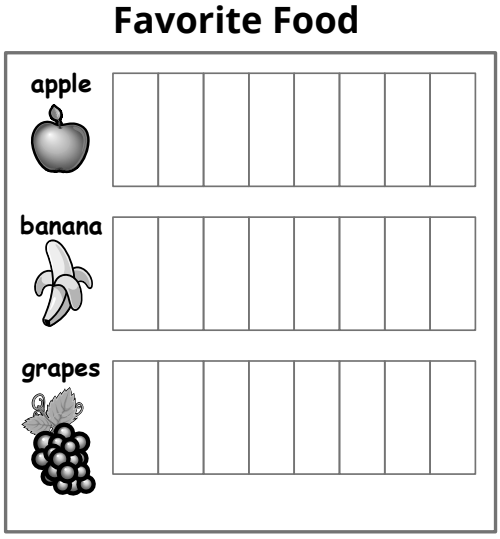
4. How many total days did the class keep track of the weather?

   The class kept track of a total of _____ days. _____

5. If the next 3 school days are sunny, how many of the school days will be sunny in all?

   _____ days will be sunny. _____

Use the data from the chart to make a bar graph by shading the boxes. Use the bar graph to answer the questions. For Questions 6-8, fill in the blank and write a number sentence.



Food	Number of Votes
Apple	𝍸 |
Banana	𝍸
Grapes	||||

6. How many fewer students chose bananas than apples?

   _____ fewer students chose bananas than apples. _____

7. How many more students chose bananas than grapes?

   _____ more students chose bananas than grapes. _____

8. How many fewer students chose grapes than apples?

   _____ fewer students chose grapes than apples. _____

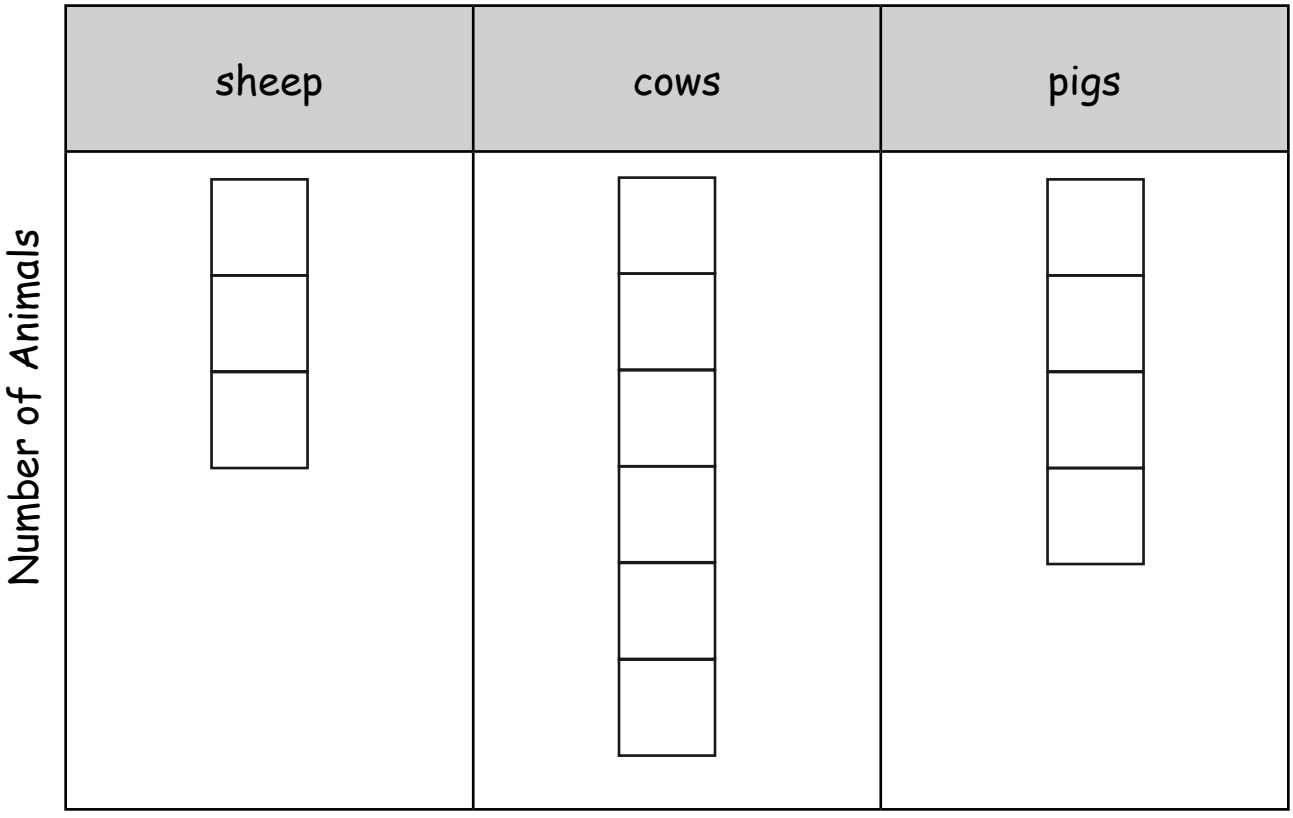
9. Some more students answered about their favorite fruits. If the new total number of students who answered is 20, how many more students answered?

   _____ more students answered the question. _____

Name _____ Date _____

Use the graph to answer the questions.

Animals on Lily's Farm ☐ = 1 animal



1. How many animals are on Lily's farm in all? _____ animals
2. How many fewer sheep than pigs are on Lily's farm? _____ fewer sheep
3. How many more cows are on Lily's farm than sheep? _____ more cows
4. What is another question you can ask about this bar graph?

_____

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OER K–5 Math

EDITION 1

ENGLISH

LEARN

ORDERING AND COMPARING LENGTH MEASUREMENTS AS NUMBERS

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