GRADE 1 • MODULE 3
Ordering and Comparing Length Measurements as Numbers

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New York State Common Core Mathematics Curriculum
Name _______________________________  Date ________________

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

1. Abby is _______________ Spot.

2. B is _______________ A.

3. The American flag hat is ______________________

   the chef hat.

4. The darker bat’s wing span is ______________________

   the lighter bat’s wing span.

5. Guitar B is ______________________

   Guitar A.
6. Pencil B is ________________________ Pencil A.

7. The dark bone is ________________________ the light bone.

8. Circle true or false.

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

9. Find 3 school supplies. Draw them here in order from shortest to longest. Label each school supply.
1. Fill in the blanks.

Put the shoes in order from shortest to longest:

A
B
C

Shoe ________ is the longest. Shoe ________ is the shortest.
Follow the directions. Complete the sentences.

1. Circle the longer rabbit.
   Peter
   Floppy
   _______ is longer than _________.

2. Circle the shorter fruit.
   ___ is shorter than ___.

Write the words longer than or shorter than to make the sentences true.

3. The glue
   is ________________
   the ketchup.

4. The dragonfly's wing span
   is ________________
   the butterfly's wing span.
5. Paintbrush A is _________________ Paintbrush B.

6. The spoon is _________________ the fork.

7. Circle true or false.

   The spoon is shorter than Paintbrush B. True or False

8. Find 3 objects in your room. Draw them here in order from shortest to longest. Label each object.
The ____________ is longer than the ____________.

The ____________ is shorter than the ____________.
1. Use the paper strip provided by your teacher to measure each picture. Circle the words you need to make the sentence true.

The baseball bat is _________________ than the book.

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

a. The tube is ____________________________ the cup.

b. The iron is ____________________________ the ironing board.
Use the measurements from the first page. Circle the word that would make the sentences true.

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

4. The cup is (longer/shorter) than the ironing board.

5. The ironing board is (longer/shorter) than the book.

6. Order these objects from shortest to longest:
   
   the cup, the tube, and the paper strip.

Draw a picture to help you solve the measurement questions. Circle the word that would make the sentences true.

7. Sammy is taller than Dion.
   Janell is taller than Sammy.
   Dion is (taller than/shorter than) Janell.

8. Laura’s necklace is longer than Mihal’s necklace.
   Laura’s necklace is shorter than Sarai’s necklace.
   Sarai’s necklace is (longer than/shorter than) Mihal’s necklace.
1. Draw a picture to help you solve the measurement questions. Circle the word that would make the sentences true.

   Tanya’s doll is shorter than Aline’s doll.

   Mira’s doll is taller than Aline’s doll.

   Tanya’s doll is (taller than/shorter than) Mira’s doll.
Use your paper strip to measure each picture. Circle the words you need to make the sentence true.

1. The sundae is ____________________________ than the sundae.
   - longer than
   - shorter than
   - the same length as

   The spoon is ____________________________ than the paper.
   - longer than
   - shorter than
   - the same length as

   The spoon is ____________________________ than the sundae.

2. The balloon is ____________________________ than the cake.
   - longer than
   - shorter than
   - the same length as

3. The ball is shorter than the paper.

   So, the shoe is ____________________________ the ball.
Use the measurements from the first page. Circle the word that would make the sentences true.

4. The spoon is (longer/shorter) than the cake.

5. The balloon is (longer/shorter) than the sundae.

6. The shoe is (longer/shorter) than the balloon.

7. Order these objects from shortest to longest:
   the cake, the spoon, and the paper.

   ___________________________   ___________________________   ___________________________

Draw a picture to help you solve the measurement questions. Circle the word that would make the sentences true.

8. Marni’s hair is shorter than Wesley’s hair.
   Marni’s hair is longer than Bita’s hair.
   Bita’s hair is (longer/shorter) than Wesley’s hair.

9. Elliott is shorter than Brady.
   Sinclair is shorter than Elliott.
   Brady is (longer/shorter) than Sinclair.
Copy double-sided.

<table>
<thead>
<tr>
<th>1020</th>
</tr>
</thead>
<tbody>
<tr>
<td>3040</td>
</tr>
</tbody>
</table>
Copy double-sided.

5 groups
If _________ is longer than my foot and _________ is shorter than my foot, then _________ is longer than _________.

My foot is about the same length as ___________.

(classroom object)

(classroom object)
1. In a playroom, Lulu cut a piece of string that measured the distance from the doll house to the park. She took the same string and tried to measure the distance between the park and the store, but she ran out of string!

Which is the longer path? Circle your answer.

- the doll house to the park
- the park to the store

Use the picture to answer the questions about the rectangles.

1. Which is the shortest rectangle? __________________

2. If Rectangle A is longer than Rectangle C, the longest rectangle is _______________.

3. Order the rectangles from shortest to longest:
   __________________  __________________  __________________
1. How long is Caitlyn’s path to school? ________________ blocks

2. How long is Toby’s path to school? ________________ blocks

3. Joe’s path is shorter than Caitlyn’s. Draw Joe’s path.

   Circle the correct word to make the statement true.

4. Toby’s path is longer/shorter than Joe’s path.

5. Who took the shortest path to school? _____________________

6. Order the paths from shortest to longest:

   __________________   __________________   ________________
Use the picture to answer the questions about the students' paths to the museum.

1. How long is Kim's path to the museum? ________________ blocks

2. Iko's path is shorter than Kim's path. Draw Iko's path.

Circle the correct word to make the statement true.

3. Kim's path is longer/shorter than Iko's path.

How long is Iko's path?
1. The string that measures the path from the garden to the tree is longer than the path between the tree and the flowers. Circle the shorter path.

   - the path between the garden and the tree
   - the path between the tree and the flowers

Use the picture to answer the questions about the rectangles.

2. Which is the longest rectangle? ________________

3. If Rectangle A is longer than Rectangle C, the shortest rectangle is ________________.

4. Order the rectangles from shortest to longest:

   ________________  ________________  ________________  ________________
Use the picture to answer the questions about the children’s paths to the beach.

5. How long is Juan’s path to the beach? ______________ blocks

6. How long is Che’s path to the beach? ______________ blocks

7. Juan’s path is longer than Sean’s path. Draw Sean’s path.

Circle the correct word to make the statement true.

8. Che’s path is longer/shorter Sean’s path.

9. Who took the shortest path to the beach? ________________

10. Order the paths from shortest to longest:

_________________  __________________  __________________
<table>
<thead>
<tr>
<th>Classroom Object</th>
<th>Length Using Centimeter Cubes</th>
</tr>
</thead>
<tbody>
<tr>
<td>glue stick</td>
<td>_____ centimeter cubes long</td>
</tr>
<tr>
<td>dry erase marker</td>
<td>_____ centimeter cubes long</td>
</tr>
<tr>
<td>popsicle stick</td>
<td>_____ centimeter cubes long</td>
</tr>
<tr>
<td>paper clip</td>
<td>_____ centimeter cubes long</td>
</tr>
<tr>
<td></td>
<td>_____ centimeter cubes long</td>
</tr>
<tr>
<td></td>
<td>_____ centimeter cubes long</td>
</tr>
<tr>
<td></td>
<td>_____ centimeter cubes long</td>
</tr>
<tr>
<td></td>
<td>_____ centimeter cubes long</td>
</tr>
</tbody>
</table>
Measure the length of each object’s 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.

   ![3 centimeter cubes](image1)
   ![5 centimeter cubes](image2)

   3 centimeter cubes
   5 centimeter cubes

How would you fix the picture that shows an incorrect measurement?
1. The picture frame is about ______ centimeter cubes long.

2. The boy’s crutch is about _____ centimeter cubes long.
Measure the length of each object's picture with your cubes.

Complete the statements below.

1. The lollipop is ______ centimeter cubes long.

2. The stamp is ______ centimeter cubes long.

3. The purse is ______ centimeter cubes long.

4. The candle is ______ centimeter cubes long.

5. The bow is ______ centimeter cubes long.

6. The cookie is ______ centimeter cubes long.

7. The mug is ______ centimeter cubes long.

8. The ketchup is about ______ centimeter cubes long.

9. The envelope is about ______ centimeter cubes long.
10. Circle the picture that shows the correct way to measure.

A

B

C

D

3 centimeter cubes

4 centimeter cubes

4 centimeter cubes

4 centimeter cubes

Explain what is wrong with the measurements for the pictures you did NOT circle.
1. Circle the objects that are measured correctly.

A

B

C

3 centimeters long

5 centimeters long

4 centimeters long

2. Measure the paperclip (B) with your cubes.

The paperclip is _________ centimeter cubes long.

Check your cubes along your ruler. How long is the paperclip in centimeters?

The paperclip is _________ centimeters long.

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

3. The hamburger picture is _________ centimeters long.

4. The hotdog picture is _________ centimeters long.

5. The bread picture is _________ centimeters long.
Use centimeter cubes to measure the objects below. Fill in the length of each object.

6. The eraser is longer than the ________ but it is shorter than the ________.

Circle the word that makes the second sentence true.

7. 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 and 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.
Justin collects transportation stickers. Use the centimeter cubes from your teacher to measure Justin’s stickers. Complete the sentences about Justin’s stickers.

The motorcycle sticker is ______ centimeters long.

The fire truck sticker is ______ centimeters long.

The row boat sticker is ______ centimeters long.

The airplane sticker is ______ centimeters long.

The car sticker is ______ centimeters long.
Use the stickers' measurements to list the stickers of the row boat, the airplane, and the fire truck from longest to shortest. You can use drawings or names to list the stickers.

Longest → Shortest

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

1. The airplane sticker is longer than the _____________ sticker.

2. The row boat sticker is longer than the _____________ sticker and shorter than the _____________ sticker.

3. The motorcycle sticker is shorter than the _____________ sticker and longer than the _____________ sticker.

4. If Justin gets a new sticker that is longer than the row boat, it will also be longer than which of his other stickers? _________________

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

The bugs from longest to shortest are

Fly: ___ centimeters
Caterpillar: ___ centimeters
Bee: ___ centimeters

2. Order the objects below from shortest (1) to longest (3) by writing the number next to the object name. Use your centimeter cubes to check your answer and complete the sentences.

The noise maker: ___
The balloon: ___
The present: ___

The present is about ________ centimeters long.
The noise maker is about ________ centimeters long.
The balloon is about ________ centimeters long.
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?
Lesson 6 Exit Ticket

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.

Order the pictures of the tools from shortest to longest.

Diana bought her dad a new tool that was 6 centimeters longer than the screwdriver. Use your centimeter cubes to find out how long the new tool is. Draw a picture and complete the statement.

The new tool is ______ centimeters long.
Natasha’s teacher wants her to put the fish in order from longest to shortest. Measure each fish with the centimeter cubes that your teacher gave you. Then, use the letters to put the fish in order from longest to shortest.

Order Fish A, B, and C from longest to shortest.

A  ______ centimeters.
B  ______ centimeters.
C  ______ centimeters.

Order Fish A, B, and C from longest to shortest.
Use the fish measurements to complete the sentences.

Fish A is longer than Fish _______ and shorter than Fish _______.

Fish C is shorter than Fish_______ and longer than Fish _______.

Fish _______ is the shortest fish.

If Natasha gets a new fish that is shorter than Fish A, list the fish that the new fish is also shorter than.

Use your centimeter cubes to model each length and answer the question.

1. Henry gets a new pencil that is 19 centimeters long. He sharpens the pencil several times. If the pencil is now 9 centimeters long, how much shorter is the pencil now than when it was new?

2. Malik and Jared threw baseballs at the park. Malik threw his baseball 6 centimeters less than Jared threw his baseball. If Jared threw his baseball 17 centimeters, how far did Malik throw his baseball?
Measure the length of each object with your LARGE paper clips. Fill in the chart with your measurement.

<table>
<thead>
<tr>
<th>Name of Object</th>
<th>Number of Large Paper Clips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bottle</td>
<td></td>
</tr>
<tr>
<td>Caterpillar</td>
<td></td>
</tr>
<tr>
<td>Key</td>
<td></td>
</tr>
<tr>
<td>Pen</td>
<td></td>
</tr>
<tr>
<td>Sticker</td>
<td></td>
</tr>
<tr>
<td>Paper</td>
<td></td>
</tr>
<tr>
<td>Reading book</td>
<td></td>
</tr>
</tbody>
</table>

Lesson 7 Problem Set

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

Date: 7/30/13

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Measure the length of each object with your **SMALL** paper clips. Fill in the chart with your measurement.

<table>
<thead>
<tr>
<th>Name of Object</th>
<th>Number of Small Paper Clips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bottle</td>
<td></td>
</tr>
<tr>
<td>Caterpillar</td>
<td></td>
</tr>
<tr>
<td>Key</td>
<td></td>
</tr>
<tr>
<td>Pen</td>
<td></td>
</tr>
<tr>
<td>Sticker</td>
<td></td>
</tr>
<tr>
<td>Paper</td>
<td></td>
</tr>
<tr>
<td>Reading book</td>
<td></td>
</tr>
</tbody>
</table>
Measure the length of each object with your small and large paper clips. Fill in the chart with your measurements.

<table>
<thead>
<tr>
<th>Name of Object</th>
<th>Number of Large Paper Clips</th>
<th>Number of Small Paper Clips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bow</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Candle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vase and Flowers</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Date: 7/30/13
Name _______________________________ Date __________________

Cut the strip of paper clips. Measure the length of each object with your large paper clips to the right. Then, measure the length with your small paper clips on the back. Fill in the chart on the back of the page with your measurements.

Paintbrush

Scissors

Glue

Crayon

Eraser

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

Date: 7/30/13

<table>
<thead>
<tr>
<th>Name of Object</th>
<th>Length in Large Paper Clips</th>
<th>Length in Small Paper Clips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paintbrush</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scissors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eraser</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crayon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glue</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Now find objects around your home to measure. Record the objects you find on the chart.

<table>
<thead>
<tr>
<th>Name of Object</th>
<th>Length in Large Paper Clips</th>
<th>Length in Small Paper Clips</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
Lesson 8 Problem Set

Name _______________________________ Date __________________________

Circle the length unit you used to measure. Use the same length unit for all objects.

<table>
<thead>
<tr>
<th>Small Paperclips</th>
<th>Large Paperclips</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Classroom Object</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glue Stick</td>
<td></td>
</tr>
<tr>
<td>Dry Erase Marker</td>
<td></td>
</tr>
<tr>
<td>Unsharpened Pencil</td>
<td></td>
</tr>
<tr>
<td>Personal White Board</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Circle the length unit you used to measure. Use the same length unit for all objects.

Small Paperclips

Toothpicks

Large Paperclips

Centimeter Cubes

Choose two objects in your desk. Fill in the chart and record the measurement.

<table>
<thead>
<tr>
<th>Classroom Object</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Lesson 8 Exit Ticket

Understand the need to use the same units when comparing measurements with others.

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

Date: 7/30/13

Circle the length unit you used to measure. Use the same length unit for all objects.

- Small Paperclips
- Large Paperclips
- Toothpicks
- Centimeter Cubes

Measure each object listed in the chart and record the measurement. Add the names of other objects in your house and record their measurements.

<table>
<thead>
<tr>
<th>Home Object</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fork</td>
<td></td>
</tr>
<tr>
<td>Picture Frame</td>
<td></td>
</tr>
<tr>
<td>Pan</td>
<td></td>
</tr>
<tr>
<td>Shoe</td>
<td></td>
</tr>
</tbody>
</table>
Did you remember to add the name of the length unit after the number?  Yes  No

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

1. ____________________________

2. ____________________________

3. ____________________________
Lesson 9 Problem Set

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, draw a picture of your model.

5. Austin wants to make a paper clip train that is 13 paper clips long. If his train is already 9 paper clips long, how many more paper clips does he need?

6. Kea’s doll is 12 centimeters long, and Megan’s doll is 8 centimeters long. How much shorter is Megan’s doll than Kea’s doll?

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 Lee’s dog’s tail than the tail of Kit’s dog?
Name ________________________________ Date __________________

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

1. Mona’s hair grew 7 centimeters. Claire’s hair grew 15 centimeters. How much **less** did Mona’s hair grow than Claire’s hair?
1. Look at the picture below. How much **shorter** is Trophy A than Trophy B?

Trophy A is _____ units **shorter** than Trophy B.

2. Measure each object with centimeter cubes.

The red shovel is ____ ________________.

The green shovel is ____ ________________.

**How much longer** is the green shovel than the red shovel?

The green shovel is ____ centimeters **longer** than the red shovel.
Use your centimeter cubes to model each problem. Then, draw a picture of your model.

3. Susan grew 15 centimeters and Tyler grew 11 centimeters. How much more did Susan grow than Tyler?

4. Bob's straw is 13 centimeters. If Tom's straw is 6 centimeters, how much shorter is Tom's straw than Bob's straw?

5. A purple card is 8 toothpicks long. A red card is 12 toothpicks long. How much longer is the red card than the purple card?

6. Carlos' bean plant grew to be 9 centimeters high. Dallas' bean plant grew to be 14 centimeters high. How much higher is Dallas' plant than Carlos' plant?
A group of people were asked their favorite color. Organize the data using tally marks and answer the questions.

<table>
<thead>
<tr>
<th></th>
<th>Red</th>
<th>Green</th>
<th>Blue</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How many people like red? ___________ people like red.

How many people like blue? ___________ people like blue.

How many people like green? ___________ people like green.

What color do people like the least? ___________

Write a number sentence that tells the total number of people who were asked their favorite color.
Use the data below to answer the following questions.

<table>
<thead>
<tr>
<th>Student</th>
<th>Number of Teeth Lost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mayra</td>
<td>3</td>
</tr>
<tr>
<td>Eddie</td>
<td>5</td>
</tr>
<tr>
<td>Luna</td>
<td>4</td>
</tr>
</tbody>
</table>

1. What is the total number of students that lost 3 teeth each? _____ student(s)

2. What is the greatest number of teeth lost? _____ teeth

3. What is the total number of students that lost fewer than 5 teeth? _____ student(s)

4. Write an addition sentence for the total number of teeth all 3 students lost.

__________________________________________________________
Lesson 10 Homework

Name ___________________________ Date ________________

Students were asked about their favorite ice cream flavor. Use the data below to answer the questions.

<table>
<thead>
<tr>
<th>Ice Cream Flavor</th>
<th>Tally Marks</th>
<th>Votes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chocolate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strawberry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cookie Dough</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Write the number of students that liked each flavor in the Votes column.

2. How many students chose cookie dough as the flavor they like best? _____ students

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

4. Which flavor is the least favorite? _______________________

5. What is the total number of students who like cookie dough or chocolate the best? _____ students

6. Which two flavors were liked by a total of 7 students?

   ________________________ and ________________________

7. Write an addition sentence that shows how many students voted for their favorite ice cream flavor:

   ________________________________________________
Students voted on what they like to read the most. Organize the data using tally marks and then answer the questions.

<table>
<thead>
<tr>
<th>What Students Like to Read the Most</th>
<th>Number of People</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comic Book</td>
<td></td>
</tr>
<tr>
<td>Magazine</td>
<td></td>
</tr>
<tr>
<td>Chapter Book</td>
<td></td>
</tr>
</tbody>
</table>

1. How many students like to read chapter books? _____ students
2. Which item is the least favorite to read among the students? ______________________
3. How many more students like to read chapter books than magazines? _____ students
4. What is the total number of students that like to read magazines or chapter books? _____ students
5. Which two items did a total of 9 students like to read?
6. ________________________ and ________________________
7. Write an addition sentence that shows how many students voted.
Welcome to Data Day! Follow the directions to **collect**, **organize**, **ask**, and **answer questions** about data.

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

### Which fruit do you like best?

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Which snack do you like best?

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### What do you like to do on the playground the most?

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Which school subject do you like the best?

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Which animal would you most like to be?

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Lesson 11: Collect, sort, and organize data, then ask and answer questions about the number of data points.

Date: 7/30/13

1. How many students liked ______________ the best?

2. How many students liked ______________ the least?

3. How many more students liked ______________ than ________________?

4. What is the total number of students that liked ______________ or ________________ the best?

5. How many total students answered the question?
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 on this chart.

<table>
<thead>
<tr>
<th>Toy</th>
<th>Students’ Favorite Toy</th>
</tr>
</thead>
<tbody>
<tr>
<td>stuffed animals</td>
<td>15</td>
</tr>
<tr>
<td>toy cars</td>
<td>9</td>
</tr>
<tr>
<td>blocks</td>
<td>18</td>
</tr>
</tbody>
</table>

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? _________
Collect information about things you own. Then, organize your data like you did for the Problem Set and answer the questions.

<table>
<thead>
<tr>
<th>How many pets do you have?</th>
<th>How many toothbrushes are in your home?</th>
<th>How many pillows are in your home?</th>
<th>How many jars of tomato sauce are in your home?</th>
<th>How many picture frames are in your home?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

1. How many ____________ do you have? (Pick the item you have the most of.)

2. How many ____________ do you have? (Pick the item you have the least of.)

3. Together, how many picture frames and pillows do you have?

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

5. __________________________________________________________________________?

6. __________________________________________________________________________?
Students took a poll asking which museum is their favorite to visit. Each student could only vote once. Answer the questions based on the table.

<table>
<thead>
<tr>
<th>Museum</th>
<th>Stick Figures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science Museum</td>
<td>🤖🤖🤖🤖🤖</td>
</tr>
<tr>
<td>Art Museum</td>
<td>🤖🤖🤖🤖🤖🤖🤖</td>
</tr>
<tr>
<td>History Museum</td>
<td>🤖🤖🤖🤖</td>
</tr>
</tbody>
</table>

1. How many students chose art museums? _______ students

2. How many students chose the art museum or the science museum? _______ students

3. From this data, can you tell how many students are in this class?
Lesson 12: Ask and answer varied word problem types about a data set with three categories.

Date: 7/30/13

Name ___________________________  Date ___________________________

Use squares with no overlaps to organize the data from the list. Line up your squares carefully.

**Favorite Ice Cream Flavor** □ = 1 student

<table>
<thead>
<tr>
<th>Flavors</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vanilla</td>
<td></td>
</tr>
<tr>
<td>Chocolate</td>
<td></td>
</tr>
</tbody>
</table>

1. How many **more** students liked chocolate than liked vanilla? _________

2. How many **total** students were asked about their favorite ice cream flavor? _________ students

**Ties on Shoes** □ = 1 student

<table>
<thead>
<tr>
<th>Types of Shoe Ties</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Velcro</td>
<td></td>
</tr>
<tr>
<td>Laces</td>
<td></td>
</tr>
<tr>
<td>No Ties</td>
<td></td>
</tr>
</tbody>
</table>

3. Write a number sentence to show how many **total** students were asked about their shoes?

4. Write a number sentence to show how many **fewer** students have Velcro ties on their shoes than laces?

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Each student in the class added a sticky note to show their favorite kind of pet. Use the chart to answer the questions.

<table>
<thead>
<tr>
<th>Favorite Pet</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dog</td>
<td>![Sticky Notes]</td>
</tr>
<tr>
<td>Fish</td>
<td>![Sticky Notes]</td>
</tr>
<tr>
<td>Cat</td>
<td>![Sticky Notes]</td>
</tr>
</tbody>
</table>

5. How many students chose dogs or cats as their favorite?

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

7. How many more students chose cats than fish?
Use squares with no overlaps to organize the data from the pictures.

Line up your **squares** carefully.

### Favorite Animals at the Zoo

<table>
<thead>
<tr>
<th>Animal</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Giraffe</td>
<td></td>
</tr>
<tr>
<td>Elephant</td>
<td></td>
</tr>
<tr>
<td>Lion</td>
<td></td>
</tr>
</tbody>
</table>

Each picture represents 1 student’s vote

1. Write a number sentence to show how many **total** students were asked about their favorite animal at the zoo.

2. Write a number sentence to show how many **fewer** students like elephants than like giraffes.
The class has 18 students and they wore different kinds of shoes to school on Friday. Nine students wore sneakers, six students wore sandals, and three students wore boots. Use squares with no overlaps to organize the data from the pictures. Line up your squares carefully.

Shoes Worn on Friday

<table>
<thead>
<tr>
<th>Shoes</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sneakers</td>
<td></td>
</tr>
<tr>
<td>Sandals</td>
<td></td>
</tr>
<tr>
<td>Boots</td>
<td></td>
</tr>
</tbody>
</table>

1. How many more students wore sneakers than sandals? ________ students

2. Write a number sentence to show how you could use the chart to tell how many students were asked about their shoes on Friday.

3. Write a number sentence to show how many fewer students wore boots than sneakers.
Our school garden has been growing for two months. These are the vegetables that we have harvested so far.

**Vegetables Harvested**

<table>
<thead>
<tr>
<th>Beets</th>
<th>Carrots</th>
<th>Corn</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. How many total vegetables were harvested?
   
   ____ vegetables

9. What vegetable have students harvested the most of?
   

10. How many more beets were harvested than corn?

11. How many more beets would need to grow to have the same as the number of carrots?

---

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

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Name ____________________________ Date ______________

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

<table>
<thead>
<tr>
<th>School Day Weather</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunny 🌞</td>
</tr>
</tbody>
</table>

1. How many more day(s) were cloudy than sunny?
   _______ more day(s) were cloudy than sunny. __________________________

2. How many fewer days were cloudy than rainy?
   _______ more 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?
   _______ total days

5. If the next 3 days were sunny, how many of the school days will be sunny in all?
   _______ days would be sunny.
Use the graph to answer the questions. Fill in the blank and write a number sentence that helps you solve the problem.

<table>
<thead>
<tr>
<th>Favorite Fruit</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple</td>
<td>☺️ ☺️ ☺️ ☺️ ☺️ ☺️</td>
</tr>
<tr>
<td>Banana</td>
<td>☺️ ☺️ ☺️ ☺️ ☺️ ☺️</td>
</tr>
<tr>
<td>Grape</td>
<td>☺️ ☺️ ☺️ ☺️ ☺️ ☺️</td>
</tr>
</tbody>
</table>

7. How many fewer students chose bananas than apples?

_______ fewer students like bananas than apples. ______________________________

8. How many more students chose bananas than grapes?

_______ more students chose bananas than grapes. ______________________________

9. How many fewer students chose grapes than apples?

_______ fewer students chose grapes than apples. ______________________________

10. 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. ______________________________
Lesson 13 Exit Ticket

Name ___________________________ Date __________________

Use the graph to answer the questions. Write a number sentence.

**Animals on Lily's Farm**

<table>
<thead>
<tr>
<th>Sheep</th>
<th>Cows</th>
<th>Pigs</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Sheep Image]</td>
<td>![Cows Image]</td>
<td>![Pigs Image]</td>
</tr>
</tbody>
</table>

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
Lesson 13: Ask and answer varied word problem types about a data set with three categories.

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

**School Lunch Order**

<table>
<thead>
<tr>
<th>Hot Lunch</th>
<th>Sandwich</th>
<th>Salad</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Restaurant Dishes" /></td>
<td><img src="image" alt="Sandwich" /></td>
<td><img src="image" alt="Salad" /></td>
</tr>
</tbody>
</table>

1. How many more hot lunch orders than sandwich orders?
   
   _____ more hot lunch orders

2. How many fewer salad orders than hot lunch orders?
   
   _____ fewer salad orders

3. If 5 more students order hot lunch, how many hot lunch orders will there be?
   
   _____ hot lunch orders
Use the chart to answer the questions. Fill in the blanks and write a number sentence.

<table>
<thead>
<tr>
<th>Favorite Type of Book</th>
<th>5 students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fairy Tales</td>
<td></td>
</tr>
<tr>
<td>Science Books</td>
<td></td>
</tr>
<tr>
<td>Picture Books</td>
<td></td>
</tr>
</tbody>
</table>

1. How many more students like fairy tales than science books?
   _____ more students

2. How many fewer students like science books than picture books?
   _____ fewer students

3. How many students picked fairy tales or science books in all?
   _____ students

4. How many more students would need to pick science books to have the same number as fairy tales?
   _____ students

5. If 5 more students show up late and all pick fairy tales will this be the type of book that the most students picked as their favorite? Yes or no? Use a number sentence to show your answer.
   _______ students
1. Each student in the class put a sticky note in the chart to show the vegetable they like best. Use the table below to answer the questions. Remember to label your answers.

**Vegetables that Students Like Best**

<table>
<thead>
<tr>
<th>Broccoli</th>
<th>Peas</th>
<th>Carrots</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Broccoli Image]</td>
<td>![Peas Image]</td>
<td>![Carrots Image]</td>
</tr>
</tbody>
</table>

   - How many students like carrots the best? 
   - How many students like carrots and peas the best? 
   - How many total students answered the survey? 
   - How many more students like broccoli than like peas the best? 
   - How many fewer students like broccoli than like carrots the best?
2. Cesar has a piece of string that he wants to use to compare how far his cat’s bed and his dog’s bed are from their shared water bowl.

The string is a lot longer than the dog’s path to the bowl.
The string is a lot shorter than the cat’s path to the bowl.

Whose path is shorter to their water bowl, the dog’s or the cat’s? Draw a picture to show how you know.
3. Circle the pictures that show a correct measurement. a centimeter cube.

a.

b.

3 centimeters

4 centimeters

c.
d.
e.

5 centimeters

2 paper clips

3 paper clips

a. Why did you pick these pictures? Explain your thinking with two reasons.

_________________________________________________________________

_________________________________________________________________

b. What was the length measurement of the bone for each correct picture?

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

c. Why are the (d) and (e) measurements with paper clips different?

_________________________________________________________________

_________________________________________________________________
4. Measure the length of the picture of each item with centimeter cubes.

a. __________ centimeters

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Train</td>
<td>Pencil</td>
<td>Lollipop</td>
</tr>
</tbody>
</table>

b. Order the train, pencil, and lollipop from shortest to longest.

c. Which item, or items, are longer than the lollipop?

d. How much longer is the pencil than the train?
Learning Resources
CoSer 501
Educational Media

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