Name _____ Date _____

Rolling Along in Centimeters

1. Draw a picture to show how you will set up the lab. Be sure to show the two main variables.

2. What are the two main variables in this lab?

_____

3. What should stay the same each time the car is rolled?

_____

4. What question are you trying to answer?

_____

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Student Activity Book

Rolling Along in Centimeters (SAB pp. 209–213) Questions 1–10

1.* See Figure 5 for a sample drawing.
2. car, distance rolled
3. Possible response: ramp height, starting line, units, how we measured
4. Which car rolls the farthest?
5.* See sample data table in Figure 7.
6.* See sample bar graph in Figure 8.

Name _____ Date _____

5. Work with your group to test each car. Record your data in the table below.

Distance Cars Roll

T Type of Car	*D* Distance Rolled Distance in _____ (Unit)			
	Trial 1	Trial 2	Trial 3	Median
Sample				

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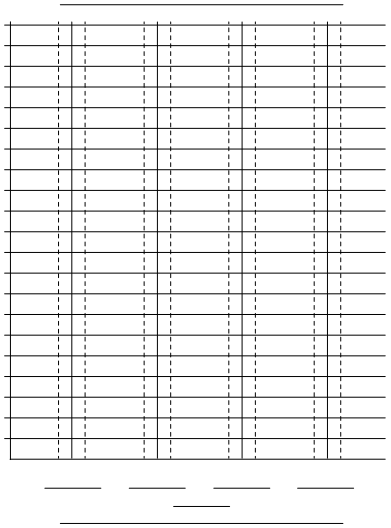
Name _____ Date _____

✓ **Check-In: Question 6**

6. Make a bar graph of your data.



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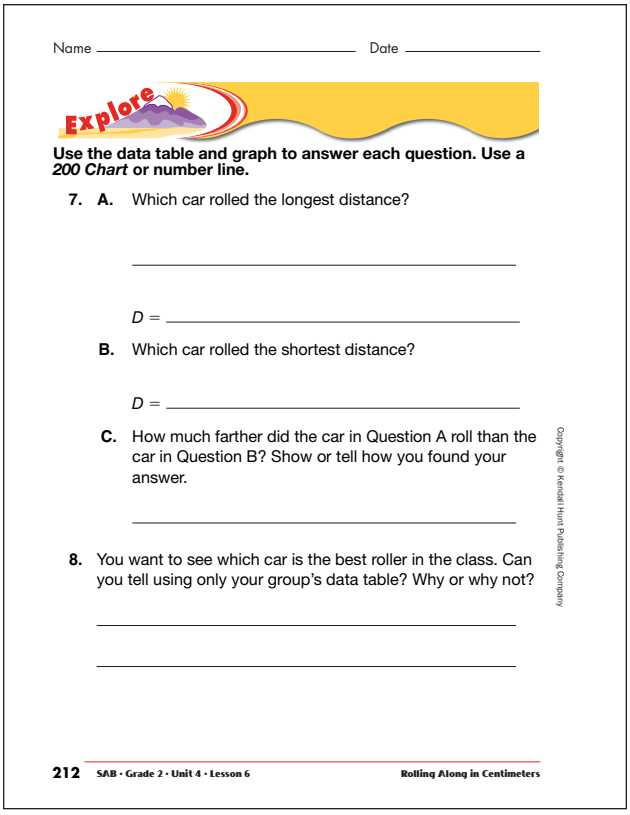
*Answers and/or discussion are included in the lesson.

7. **A–C.** Answers will vary.
8. No. The data from all the other students is needed.
9. Linda forgot to label her answer: 132 cm.
10. **A.** 175 cm
    B. 65 cm



Name _____ Date _____

Explore

Use the data table and graph to answer each question. Use a *200 Chart* or number line.

7. A. Which car rolled the longest distance?

_____

D = _____

B. Which car rolled the shortest distance?

D = _____

C. How much farther did the car in Question A roll than the car in Question B? Show or tell how you found your answer.

_____

8. You want to see which car is the best roller in the class. Can you tell using only your group's data table? Why or why not?

_____

_____

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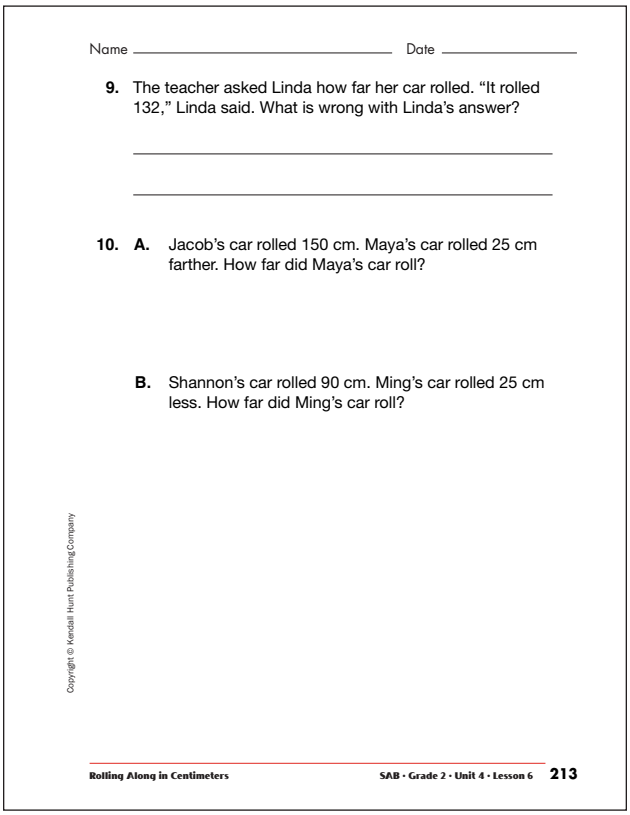


Name _____ Date _____

9. The teacher asked Linda how far her car rolled. "It rolled 132," Linda said. What is wrong with Linda's answer?

_____

_____

10. A. Jacob's car rolled 150 cm. Maya's car rolled 25 cm farther. How far did Maya's car roll?

B. Shannon's car rolled 90 cm. Ming's car rolled 25 cm less. How far did Ming's car roll?

***Student Activity Book* - Page 213**

Name _____ Date _____

Solve these problems by looking at the graph of John's Data. You may use your *200 Chart,* number line, or other tools to help you.

1. Michael said the green car went farther than the red car, blue car, and the yellow car all added together. Is he right? Show or tell how you know.

2. Linda said the yellow car rolled more than twice as many centimeters as the red car rolled. Is she right? Show or tell how you know.

✓ **Check-In: Questions 3-10**

3. How far did the yellow car roll?

4. How far did the blue car roll?

5. How much farther did the green car roll than the yellow car?

   Show or tell how you know.

6. How much father did the yellow car roll than the blue car?

   Show or tell how you know.

***Student Activity Book* - Page 216**

Name _____ Date _____

Compare the distances the cars rolled.

< less than
> greater than
= equal to

7. 120 cm ◯ 155 cm
8. 35 cm ◯ 155 cm–120 cm
9. 50 cm ◯ 35 cm
10. **A.** How many cars rolled farther than 1 meter?

    _____

    B. Which ones? _____

    C. How many centimeters more than a meter did each of the cars in Question 10B roll? Show or tell how you know. You can write on the graph as part of your answer.

***Student Activity Book* - Page 217**

John's Data (SAB pp. 215–217) Questions 1–10

Distance Cars Roll

T Type of Car	*D* Distance in Centimeters
red car	50
blue car	35
yellow car	120
green car	155

1.* Michael is wrong. The red, blue, and yellow cars rolled 205 cm; 50 + 35 + 120.

2.* Linda is right. 120 cm is more than twice 50 cm.

3. 120 cm

4. 35cm

5. 35 cm; Possible response: the green car rolled 155 cm; the yellow car rolled 120 cm; I found 120 on the 200 Chart and skip counted by tens and then ones.

6. 85 cm; Possible responses: I looked at the graph and skip counted by 10 down from 120 to 35; I used data from the data table and my 200 Chart to count on by tens and ones from 35 to 120.

7. <

8. =

9. >

10. **A.** 2 cars

    B. yellow and green cars

    C. yellow car: 20 cm more than a meter; green car: 55 cm more than a meter

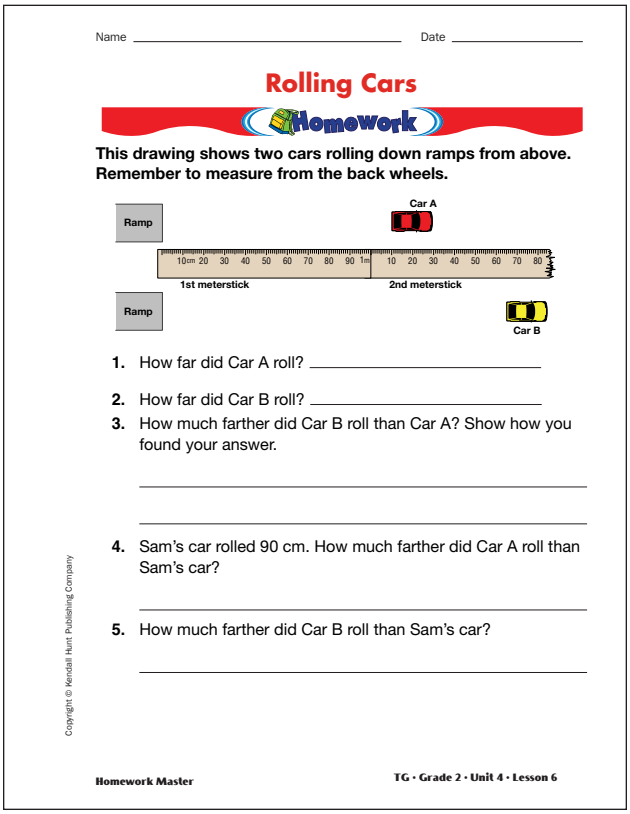
    Answers will vary. Students need to identify 1 meter as 100 centimeters. Possible response: I know 1 meter is 100 centimeters. I found the 100 cm distance on the graph and counted up by tens from 100 to 120 for the yellow car and from 100 to 150 for the green car and added 5 more because the bar stops between 150 and 160.

***Answers and/or discussion are included in the lesson.**

Teacher Guide

Rolling Cars (TG)
Homework
Questions 1–3

1. 110 cm
2. 165 cm
3. 55 cm farther. Possible strategy: I started at 110 and counted up by tens to 160, then I added 5 more.
4. 20 cm
5. 75 cm



Name _____ Date _____

Rolling Cars

Homework

This drawing shows two cars rolling down ramps from above. Remember to measure from the back wheels.

Ramp
Car A
1st meterstick
2nd meterstick
Ramp
Car B

1. How far did Car A roll? _____
2. How far did Car B roll? _____
3. How much farther did Car B roll than Car A? Show how you found your answer.

_____

_____

4. Sam's car rolled 90 cm. How much farther did Car A roll than Sam's car?

_____

5. How much farther did Car B roll than Sam's car?

_____

Homework Master

TG • Grade 2 • Unit 4 • Lesson 6

Teacher Guide

Name _____ Date _____

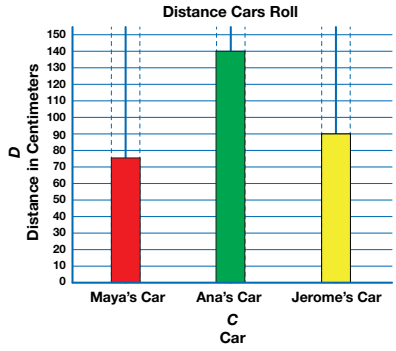
Make It True

Homework

Dear Family Member:

Your child has been learning to read and interpret graphs and then use the information to solve problems. Have your child explain how he or she found the answers to these questions using the graph.

Thank you.



Read each sentence. Look at the graph to see if it is true or false.

- **Circle true or false following the sentence.**
- **If it is false, correct the sentence to make it true. Use the space below each sentence for any corrections.**

Teacher Guide - Page 1

Name _____ Date _____

1. Jerome's car rolled the farthest.
   True False
   _____
2. Maya's car rolled 70 cm.
   True False
   _____
3. Maya's car rolled 15 cm farther than Jerome's car.
   True False
   _____
4. Ana's car rolled 50 cm farther than Jerome's car.
   True False
   _____
5. Show or tell how you solved Question 4.

6. Use the data in the graph to write a true sentence.

Teacher Guide - Page 2

Make It True (TG p. 1-2)
Homework
Questions 1–6

1. False; Ana's car rolled farthest.
2. False: Maya's car rolled 75 cm.
3. False; Jerome's car rolled 15 cm farther than Maya's car.
4. True
5. Strategies will vary. Students can count back on the number line, skip counting by tens, or use the graph to skip count by tens from 90 to 140.
6. Sentences will vary. Possible response: The distance Maya's car and Jerome's car traveled together is 75 cm + 90 cm = 165 cm.