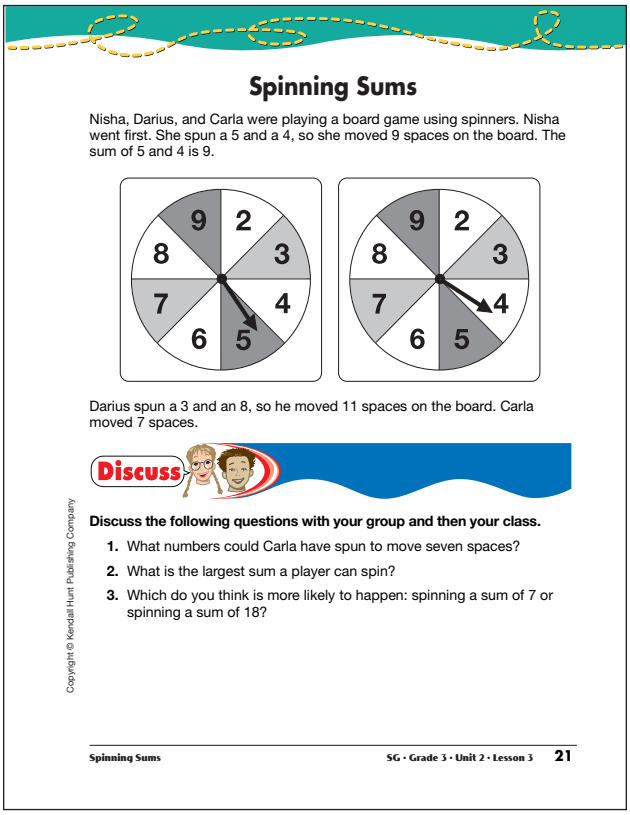


Spinning Sums

Nisha, Darius, and Carla were playing a board game using spinners. Nisha went first. She spun a 5 and a 4, so she moved 9 spaces on the board. The sum of 5 and 4 is 9.

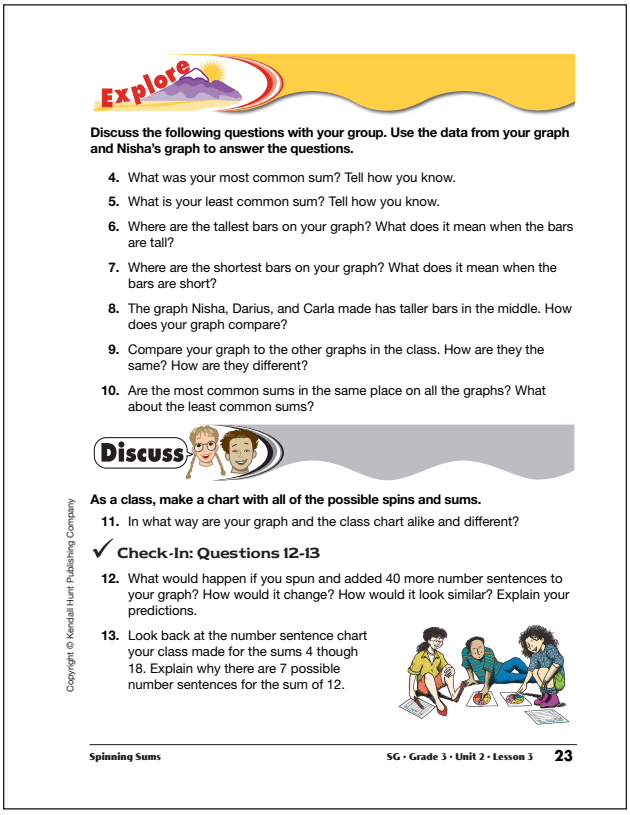
Darius spun a 3 and an 8, so he moved 11 spaces on the board. Carla moved 7 spaces.

Discuss

Discuss the following questions with your group and then your class.

1. What numbers could Carla have spun to move seven spaces?
2. What is the largest sum a player can spin?
3. Which do you think is more likely to happen: spinning a sum of 7 or spinning a sum of 18?

***Student Guide* - Page 21**



Explore

Discuss the following questions with your group. Use the data from your graph and Nisha's graph to answer the questions.

4. What was your most common sum? Tell how you know.
5. What is your least common sum? Tell how you know.
6. Where are the tallest bars on your graph? What does it mean when the bars are tall?
7. Where are the shortest bars on your graph? What does it mean when the bars are short?
8. The graph Nisha, Darius, and Carla made has taller bars in the middle. How does your graph compare?
9. Compare your graph to the other graphs in the class. How are they the same? How are they different?
10. Are the most common sums in the same place on all the graphs? What about the least common sums?

Discuss

As a class, make a chart with all of the possible spins and sums.

11. In what way are your graph and the class chart alike and different?

✓ **Check-In: Questions 12-13**

12. What would happen if you spun and added 40 more number sentences to your graph? How would it change? How would it look similar? Explain your predictions.
13. Look back at the number sentence chart your class made for the sums 4 though 18. Explain why there are 7 possible number sentences for the sum of 12.

***Student Guide* - Page 23**

Student Guide

Spinning Sums (SG pp. 21–23)
Questions 1–13

1.* Answers will vary. 2 and 5; 5 and 2; 3 and 4; 4 and 3

2.* 18

3.* spinning a sum of 7

The following answers to ***Questions 4–11*** are based on the Spinning Sums graph in the *Student Guide*.

4. 11; the sum of 11 occurred seven times. The bar on 11 is the tallest.

5. 6, 16, and 17; the sums 6, 16, and 17 do not have bars on the graph.

6. In the middle; the sums in the middle are most common.

7. At either end; the sums near the ends are the least common.

8. Answers may vary.

9–10.* Answers may vary.

Similarities: The most common sums are clustered in the middle. The least common sums are clustered near both ends.

Differences: The most common sum for each group is not always the same, nor is the least common sum. Some groups may have 11 for the most common sum, while others have 10 or 12. Some groups have bars on every sum. Others have sums with no bars at all.

11. Answers will vary.

12.* Answers will vary. See the *Lesson Guide* for a sample student paragraph.

13. Possible response: The sum of 12 has seven number sentences because you can use the same numbers for 2 different number sentences by changing the order. So, you can have 3 + 9 and 9 + 3, 8 + 4 and 4 + 8; 7 + 5 and 5 + 7. That makes six number sentences. Then there is one double, 6 + 6, so there are seven number sentences in all.

Student Activity Book

Spinning Sums Lab (SAB pp. 37–42)
Questions 1–2*

Answers, tables, and graphs will vary.

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