

The Mean as a Balance Point

Lesson 1-4

DATE

TIME

Math Message

- 1 a. Describe the picture to the right.



- b. What keeps the two sides balanced?

- c. What might happen if another person of the same weight climbed onto the right side?

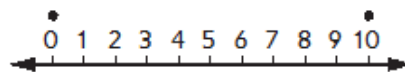
- d. Draw a picture of how the platform could remain balanced with three people who weigh the same.

Hint: You do not have to keep everything in the same position.



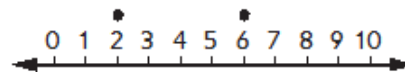
- 2 Show where the balance point is for the two sides.

Explain its placement.



- 3 Show where the balance point is for the two sides.

If the dot on the right is moved to 7, where should you move the dot on the left to keep the balance point the same?



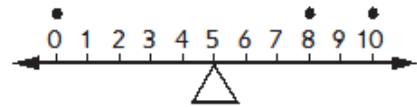
The Mean as a Balance Point (continued)

Lesson 1-4

DATE

TIME

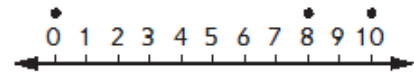
- 4 a. Are the two sides balanced around the balance point? Explain.



- b. Draw a dot to balance the two sides.
- c. Explain how you could add two more dots and still keep the two sides balanced.

- d. Explain how you could add three more dots and still keep the two sides balanced.
Hint: More than one dot can be on the same number.

- 5 Show where the balance point is for the two sides. Explain its placement.



- 6 The dots in Problem 5 could be a dot plot for a data set. Find the mean for the dot plot using Jalen's strategy from Lesson 1-3. (Jalen adds the values and divides the total by the number of addends.)

- 7 What do you notice about the balance point and the mean?

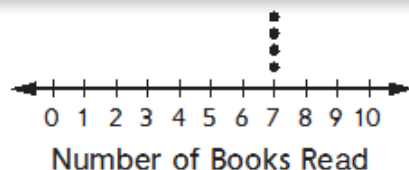
Same Mean, Different Distributions

Lesson 1-4

DATE _____

TIME _____

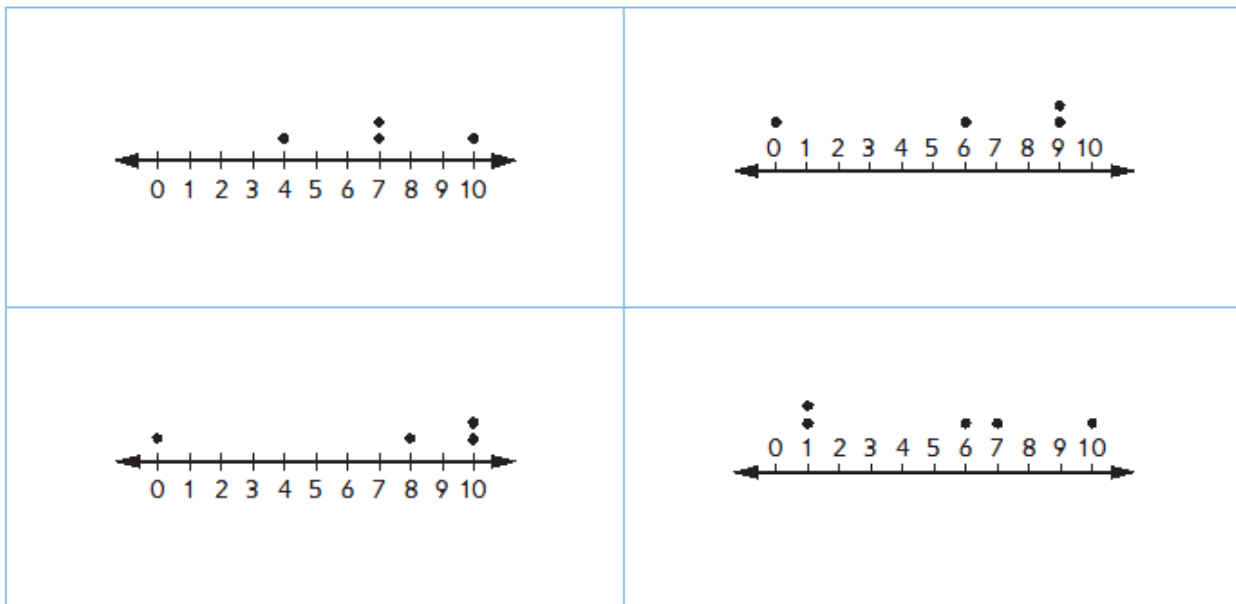
- 1 Leonardo asked four students how many books they read during the summer. He made this dot plot to show their answers.



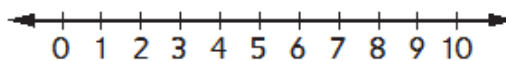
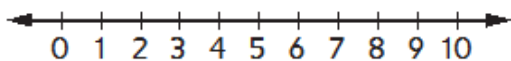
- Find the mean for the data set. _____
- Describe what you know about how many books the students read.

- How likely would it be that four of your friends all read the same number of books?

- 2 The dot plots below show some other possible results for a survey about books read during the summer. Circle the plots that have a balance point (or mean) of 7. If the balance point (or mean) is not 7, draw a triangle to indicate what it is.



- 3 Make dot plots that represent surveys of two different groups of five people. Nobody in this survey read 3 books, but the balance point (or mean) of each should be 3.



Solving Number Stories

Lesson 1-4

DATE

TIME

- 1** Bob mows lawns for 5 weeks during summer break. He mows 2 lawns every day. By the end of 5 weeks, how many lawns has Bob mowed? _____
- 2** In the first week of the month Denise spent 120 minutes on chores. In the second week she spent 150 minutes. In the third week she spent 95 minutes, and in the fourth week she spent 140 minutes.
- a.** How many total minutes did Denise spend on chores this month? _____
- b.** Denise tells her mom that she spent more than 8 hours on chores this month. Is she correct? Explain how you know.
- _____
- _____
- 3** Lynn's track team practices for 3 weeks before their first meet. The coach wants them to get in a total of 720 minutes of practice time before the first meet. If the track team meets every Monday, Wednesday, and Friday for 70 minutes, will they have enough practice time before the first meet? Explain.
- _____
- _____
- _____
- 4** Dontrell, Jasmine, and Ray are shooting baskets after school. Dontrell makes twice as many shots as Ray. Jasmine makes 4 more shots than Ray. Together all three friends make 48 shots. How many baskets did each person make?
- _____
- 5** Each veggie tray that the dance committee orders serves 12 people. Each veggie tray contains 30 carrot sticks. If the dance committee orders 7 trays, how many carrot sticks will they have?
- _____