

## Extension 10.3 Lesson: Choosing Appropriate Measures

### **Key Idea**

#### **Choosing Appropriate Measures**

The mean absolute deviation (MAD) uses the mean in its calculation. So, when a data distribution is *symmetric*,

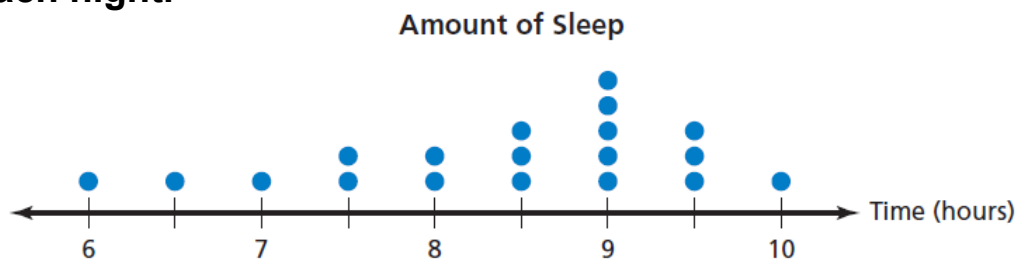
- use the mean to describe the center and
- use the MAD to describe the variation.

The interquartile range (IQR) uses quartiles in its calculation. So, when a data distribution is *skewed*,

- use the median to describe the center and
- use the IQR to describe the variation.

### Example 1: Choosing Appropriate Measures

The dot plot shows the average number of hours students in a class sleep each night.

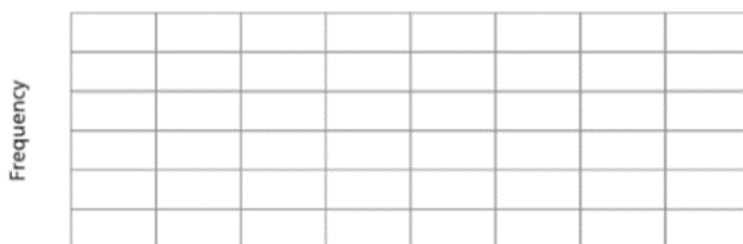


- a. What are the most appropriate measures to describe the center and the variation?
  
  
  
  
  
  
  
  
  
  
- b. Describe the center and the variation of the data set.

### Example 2: Choosing Appropriate Measures

The frequency table shows the number of states that border each state in the United States.

a. Display the data in a histogram.



Bordering States	Frequency
0-1	3
2-3	13
4-5	22
6-7	10
8-9	2

b. What are the most appropriate measures to describe the center and the variation?