Find the Mean

Name _____

Learning Target: Find and interpret the mean of a data set.

Success Criteria:

- I can explain how the mean describes a data set with a single number.
- I can find the mean of a data set.
- I can interpret the mean of a data set.

Think and Grow

Key Idea The **mean** of a data set is the sum of the data divided by the number of data values. The mean is a type of average.

Data: 2, 6, 1, 3, 3 — 5 data values

Mean: $\frac{2 + 6 + 1 + 3 + 3}{5} = \frac{15}{5} = 3$

Example The table shows the number of books read by a group of students over the summer. What is the mean number of books read?

Emma	Mike	Kate	Alexa	Angela	John
9	8	7	10	6	8

Mean $= \frac{9 + 8 + 7 + 10 + 6 + 8}{6}$ ← sum of the data; ← number of values

$= \frac{\square}{6}$ Add values in the numerator.

$=$ _____ Divide.

The mean number of books read is _____. So, each student read about _____ books over the summer.

Show and Grow

Find and interpret the mean of the data.

1. Dollars earned by a group of friends: 9, 13, 15, 12, 11, 14, 17

2. Number of stamps in several collections: 34, 55, 60, 73, 48, 92, 78, 48

Practice

Name _____

Find and interpret the mean of the data.

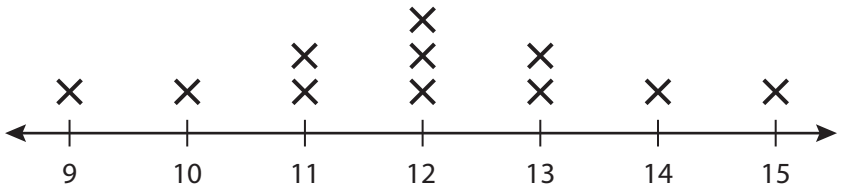
3. Number of states visited by several students: 6, 1, 7, 3, 2, 1, 3, 4, 9

4. Ages of professional hockey players (years): 26, 28, 32, 19, 23, 31, 27, 30

5. Class test scores: 84, 81, 91, 97, 76, 98, 73, 83, 88, 91, 78, 80

6. MP **Structure** Where on the line plot is the data set *balanced*? How does this point relate to the mean of the data?

Players on Baseball Teams



Number of Players

7. **YOU BE THE TEACHER** Newton finds the mean of the following data set: 10, 12, 6, 6, 11, 9. Is he correct? Explain.

Mean: $\frac{10 + 12 + 6 + 11 + 9}{6} = \frac{48}{6} = 8$

8. MP **Reasoning** Tell whether the following statement is *always*, *sometimes*, or *never* true. Use examples to support your answer.

"The mean is equal to a value in the data set."

9. **Modeling Real Life** The table shows the wait times for the roller coasters at an amusement park. How long can you expect to wait before riding a roller coaster?

Roller Coaster Wait Times (minutes)			
85	100	45	80
90	65	75	60

10. **DIG DEEPER!** The table shows the lengths of the hiking trails in a county. What is the mean length of a hiking trail in this county?

Hiking Trail Lengths (miles)			
3	$5\frac{1}{2}$	7	6
4	3	$2\frac{1}{2}$	5