

**1ACE Exercises 3–6****Investigation 1****Data About Us**

For Exercises 3–6, make a **line plot** OR **bar graph** of a set of data that fits each description.

3. 24 names, with a **range** of 12 letters

**HINT** Refer back to Problem 1.1 for an example of a line plot and a bar graph.

4. 7 names, with a **median** length of 14 letters

5. 13 names, with a **median** length of 13 letters, and with data that vary from 8 letters to 17 letters

6. 16 names, with a **median** length of  $14\frac{1}{2}$  letters, and with data that vary from 11 letters to 20 letters

**2ACE Exercise 8****Investigation 2****Data About Us**

8. a. Make a coordinate graph using the data in the table. A grid is provided on the next page.

**Student Ages, Heights, and Foot Lengths**

Age (mo)	Height (cm)	Foot Length (cm)	Age (mo)	Height (cm)	Foot Length (cm)
76	126	24	148	164	26
73	117	24	140	152	22
68	112	17	114	135	20
78	123	22	108	135	22
81	117	20	105	147	22
82	122	23	113	138	22
80	130	22	120	141	20
90	127	21	120	146	24
101	127	21	132	147	23
99	124	21	132	155	21
103	130	20	129	141	22
101	134	21	138	161	28
145	172	32	152	156	30
146	163	27	149	157	27
144	158	25	132	150	25

What are the smallest and largest age values?

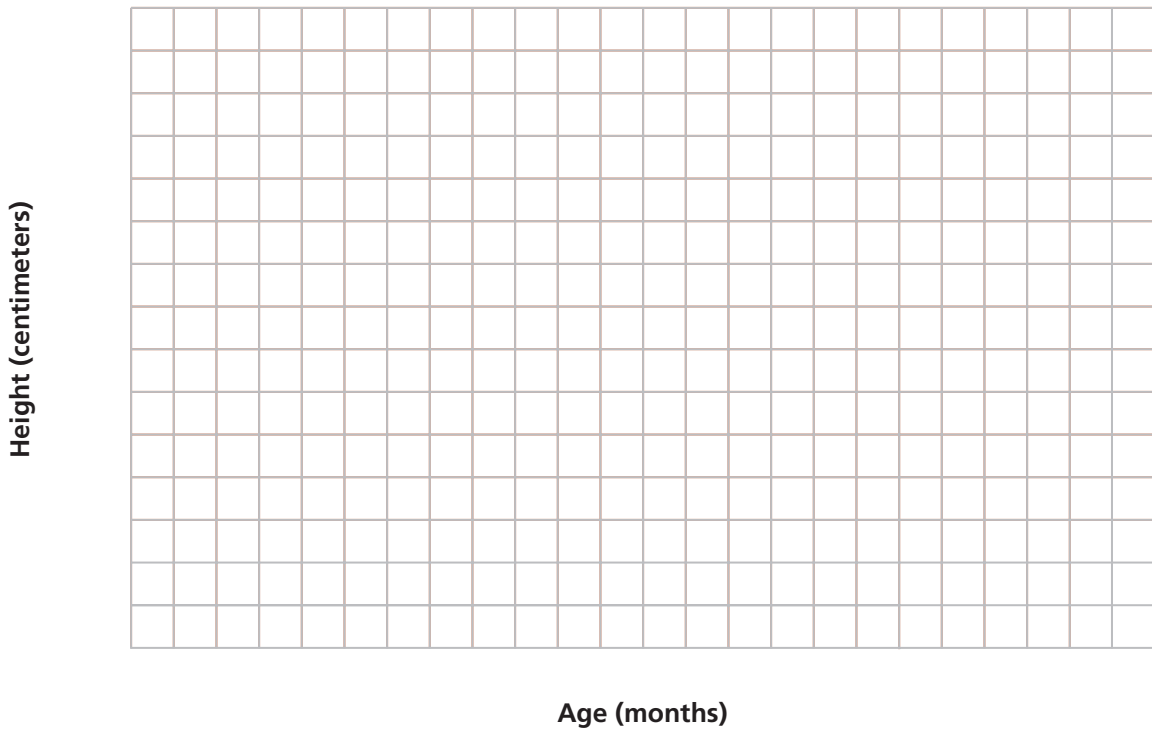
**HINT** Use these values and the next values to help you decide on a scale to use in the graph.

What are the smallest and largest height values?

**2ACE Exercise 8** *(continued)*

**Investigation 2**

**Data About Us**



- b. Explain how you can use your graph to find out whether the youngest student is also the shortest student?
  
- c. Use your graph to describe what happens to students' heights as the students get older.

**HINT** As a student gets older, does it appear that they grow faster or slower?

## 2ACE Exercise 8 *(continued)*

### Investigation 2

#### Data About Us

- d. What would happen to the graph if you extended it to include people in their late teens or early twenties?

**HINT** If you added older people and their heights to the graph, where would the points go? What would the graph look like?

Explain why the graph would be affected.

## 3ACE Exercise 6

### Investigation 3

#### Data About Us

6. A group of 9 students has a **mean** of 5 people per household. The largest household in the group has 10 people. Make a **line plot** showing a data set that fits this description.

**HINT** Refer back to Problem 1.1 for an example of a line plot.

**HINT** There are multiple ways to address this exercise. You can draw a line plot to show just 9 student's households where the mean is 5 and the maximum is 10.

# Check Up

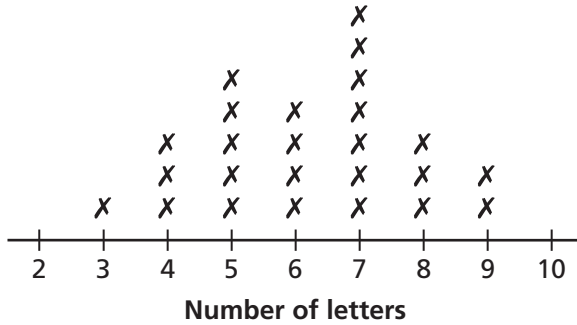
## Data About Us

1. Consider each distribution below.

For each distribution, where possible,

- tell how many people are represented by the data
- identify the **mode** and the **median**

a. **Lengths of Last Names**



Number of people represented:

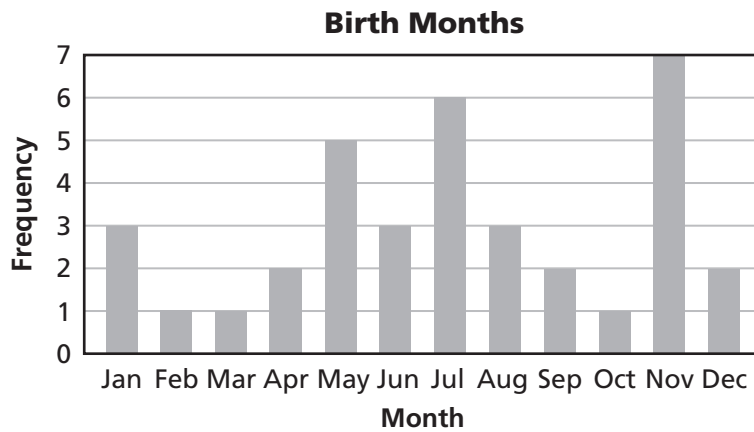
Mode =

Median =

**Check Up** *(continued)*

**Data About Us**

b.



Number of people represented:

Mode =

Median =

Range =

- Make a line plot showing the lengths of 11 names so that the **median length is 12 letters** and the **range is from 6 letters to 16 letters**.

## Check Up *(continued)*

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### Data About Us

3. The media specialist in your school is planning a book fair. She is preparing a survey to ask students a few questions to help make the book fair a success.
- a. Write one question that will give the media specialist *numerical* data.

Explain why she might want to know this information.

- b. Write one question that will give the media specialist *categorical* data.

Explain why she might want to know this information.