

## EXPLORE!

## HOW TALL?

**Step 1:** Find your height to the nearest inch and record your answer using only inches. If you are 5 feet 2 inches tall, for example, you would use the process below to convert your measurement to inches:

$$5 \text{ feet} \cdot 12 \text{ inches per foot} = 60 \text{ inches}$$

$$\text{Add the 2 extra inches } (60 + 2)$$

$$5' 2'' = 62 \text{ inches tall}$$

**Step 2:** Record the height data for all the students in your class, including your own.

**Step 3:** What are the minimum (lowest) and maximum (highest) values in the height data? What is the range of the data?

**Step 4:** Make a number line that extends from the minimum to the maximum value in **Step 3**. Evenly space “tick marks” along the number line for each of the values between the minimum and maximum.

**Step 5:** Using your data set from **Step 2**, put a dot above the number line for each data value. If a data value occurs more than once, stack the dots as shown in **Example 1**.

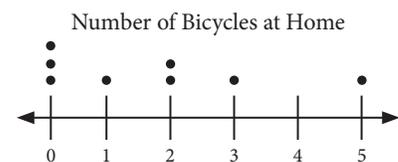
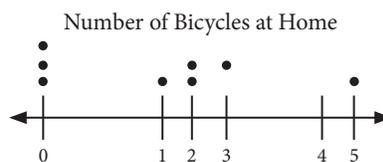
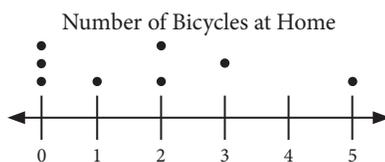
**Step 6:** Describe the spread of your data. Are your values clustered together or are they spread out?

**Step 7:** Based on your dot plot, what is the mode of the data? How can you tell by looking at your dot plot?

**Step 8:** What is the median of your data set? How does the median compare with the mode?



Michelle made three dot plots to show the answers to her statistical question. Which dot plot is drawn correctly?



The first dot plot looks as if there are as many people with 2 bicycles as those with 0 bicycles. This is because the dots are not equally spaced above the number line. The second dot plot does not have the values equally spaced along the number line. The third dot plot is drawn correctly.