

# Notes and Handouts

Name: \_\_\_\_\_

Unit: *Graphing and Data Analysis*

Math6

Period: \_\_\_\_\_

## Create and Interpret Bar Graphs and Histograms



**Goal:** I will learn to create and interpret data found in bar graphs and histograms.

**Bar Graph:** a way to visually display and compare numerical data using horizontal bars (side to side) or vertical bars (up to down). Bar graphs are great to show relative sizes of data.

**Scale:** The “ruler” that measures the heights of the bars.

**Intervals:** The equal divisions marked on the scale to make it easier to read.

**Horizontal Axis:** The horizontal line on the graph (runs east to west).

**Vertical Axis:** The vertical line on the graph (runs north to south).

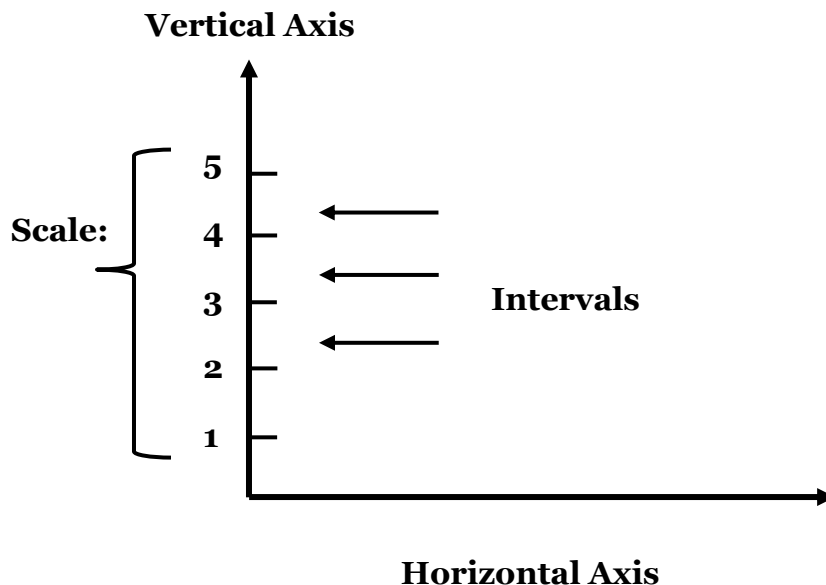
**Range:** The difference between the highest and lowest values in a data set.

EX: 13, 8, 19, 15, 11, 22, 14, 17

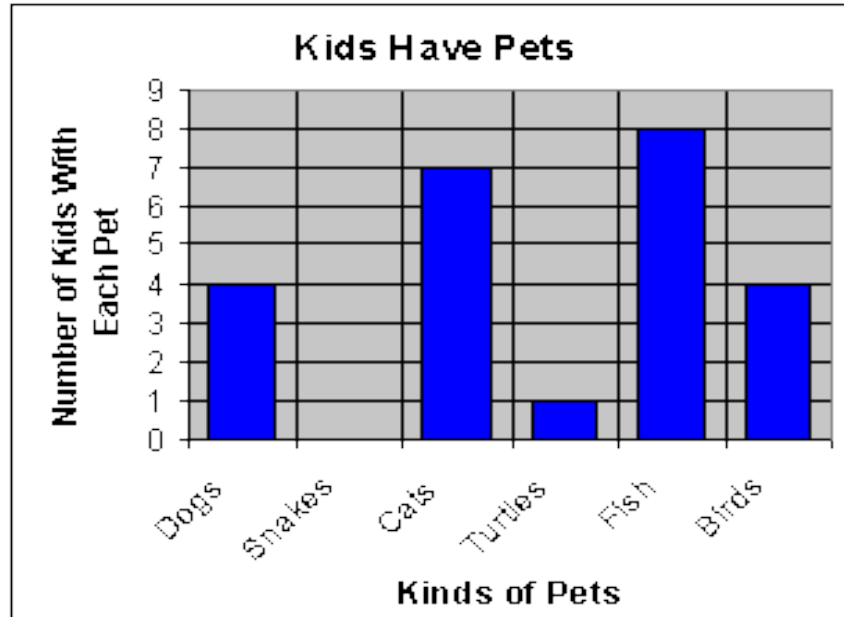
Range:  $22 - 8 = 14$

**Histogram:** A bar graph in which the bars show ranges of continuous data (no gaps). Each bar represents an equal amount of numbers. The bars touch and the numbers are continuous.

### Visual Model:

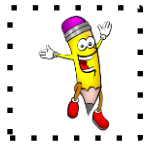


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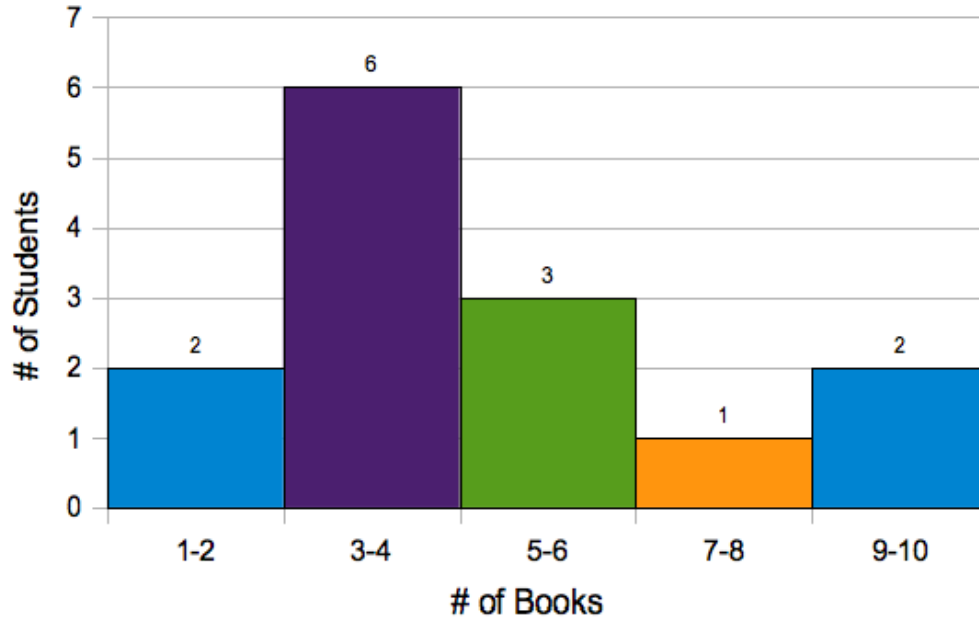


**YOU GOT THIS!**

1. What pet is most popular?
2. Which two pets are tied?
3. There are more cats than which two pets combined?



## How Many Books Did You Read This Year?



### **YOU GOT THIS!**

1. How many students read 5 or 6 books?
2. How many students read more than 2 books?
3. Which is the most popular number of books read by this group?
4. How many observations are there in all?
5. How many books were read in all?

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To create a bar graph or a histogram:

1. Set the graph up with both a vertical side and a horizontal side (axes) and label each.
2. Decide on a scale and mark each interval.
3. Create the graph using your collected data.
4. Label each axes, and give your graph a title.



YOU GOT THIS!!

Below are two story problems. Analyze each problem and decide which one would make the better bar graph and which one would make the better histogram. Remember—a histogram shows a continuous line of data, and a bar graph shows the frequencies of single pieces of data. Then make each story problem into either a bar graph or histogram.

Story problem #1:

On the first day of school Mr. Vaughn asked several students how many times they had been to beach. Here are their responses:

(6, 12, 15, 20, 30, 35, 3, 12, 18, 6, 18, 0, 4, 13, 22, 14, 5, 10, and 14)



Story problem #2:



Jake and his friends were trying to decide who is the greatest SpongeBob Squarepants character. Here are their votes: Spongebob: 8; Sandy Cheeks: 7; Eugene Krabs: 4; Squidward Tentacles: 6; Gary the Snail: 6; Patrick Star: 11; and Mrs. Puff: 5 votes.