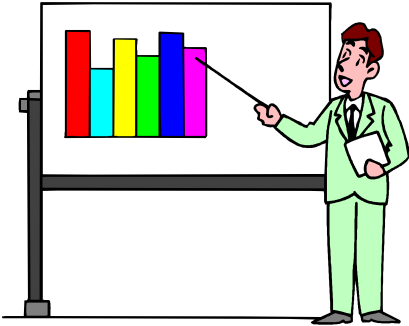


Probability and Statistics: Line Plots, Picture Graphs, and Bar Graphs

Pacing: 2 weeks

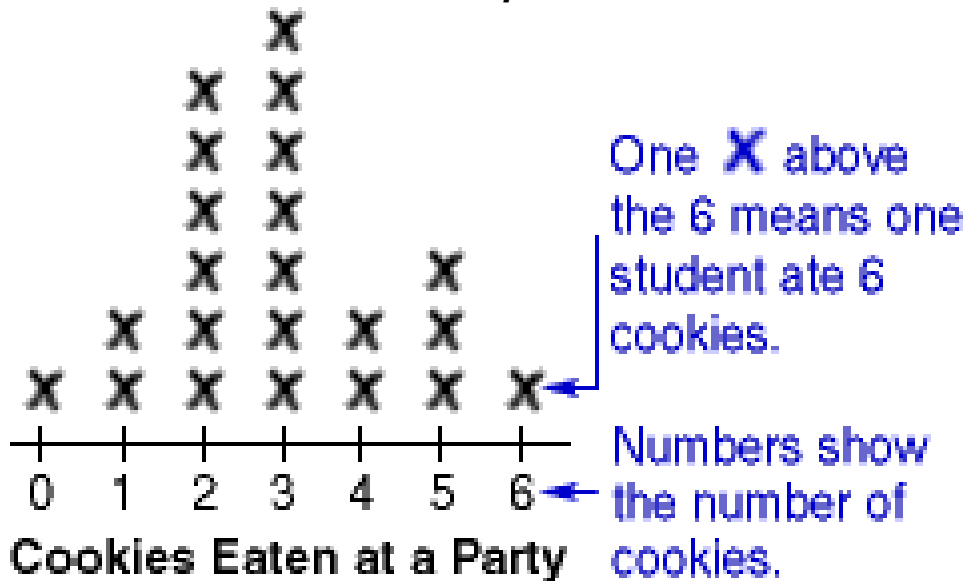


There are several ways to show data (information) that you have gathered to answer a question. One of those ways is to make a GRAPH. Below are some examples of different graphs that you can make to represent information that you have collected.

Line Plot

A graph that shows the frequency of data along a number line.

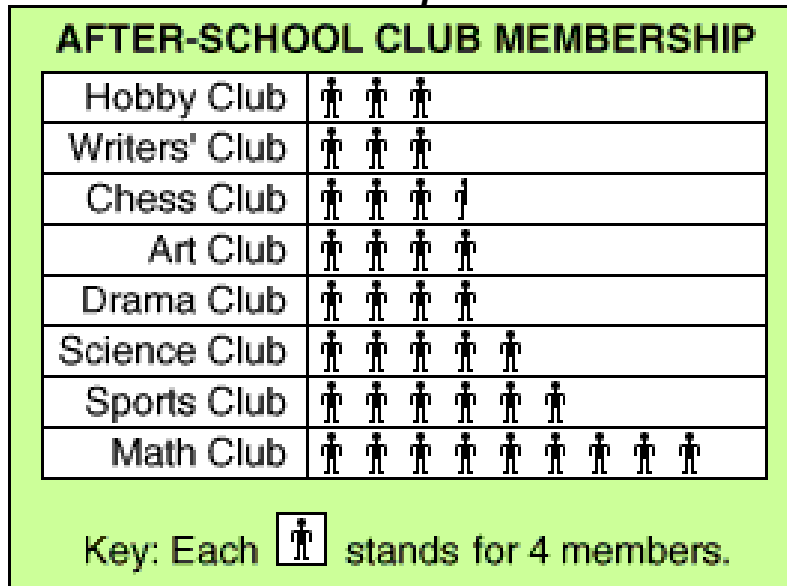
Example:



Picture Graph

A graph that uses pictures to show and compare information. One picture stands for a set amount. Count the pictures first. Then use the key to decide the amount.

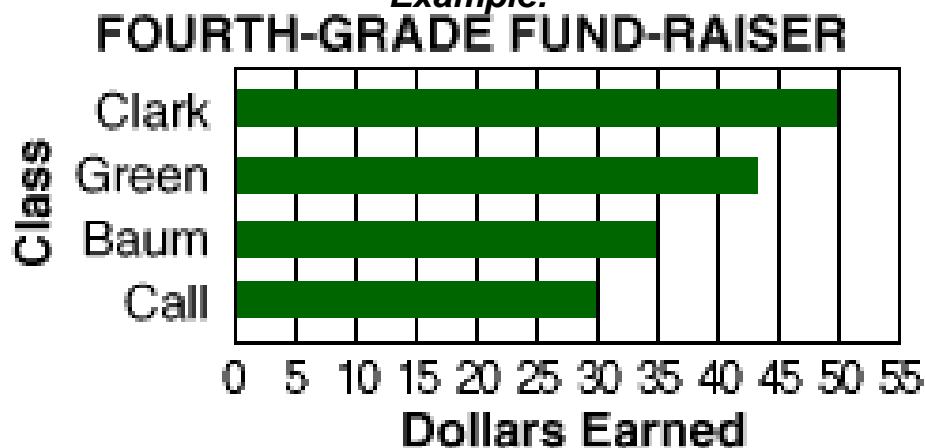
Example:



Bar Graph

A graph that uses bars to compare counts of different categories. A bar graph can have bars that run horizontally like the example below OR it can have bars that run vertically. There are spaces in between each bar and one bar for category. In the example, each class has its own bar. Each bar's length is decided by the number of dollars the class earned for the fundraiser. So, Call's class earned \$30.00 because the bar is colored all the way to the 30 mark.

Example:



All bar graphs must have TAILS. Look below to see just what kind of tails they must have.

T – Title

A – Axes

I – Increments

L – Labels

S – Spaces

Now that we've seen some examples of graphs, let's get ready to make some of our own.

When you get ready to make a bar graph there are a few things you must do first. Read the steps below to see what needs to be done.

First, collect your data (information) The best way to do this is by making a table. You can make a tally table or a frequency table. Look below to see an example of each kind.

***Suppose Regina wants to know what colors her classmates like. She will need to ask them and then record the answers. Look at the table she made.

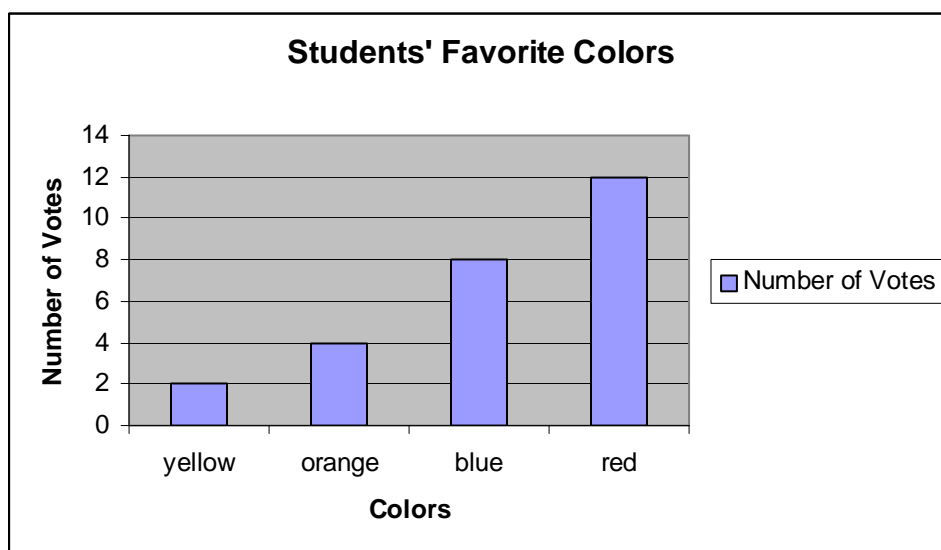
Color	Number of Votes
yellow	2
orange	4
blue	8
red	12

This is a FREQUENCY TABLE. She could have made a TALLY TABLE. This is what a TALLY TABLE looks like:

Color	Number of Votes
yellow	//
orange	////
blue	//// ////
red	//// //// //

Now that she has collected her data, she is ready to make her graph. She will be sure to use TAILS.

Look at her graph below.



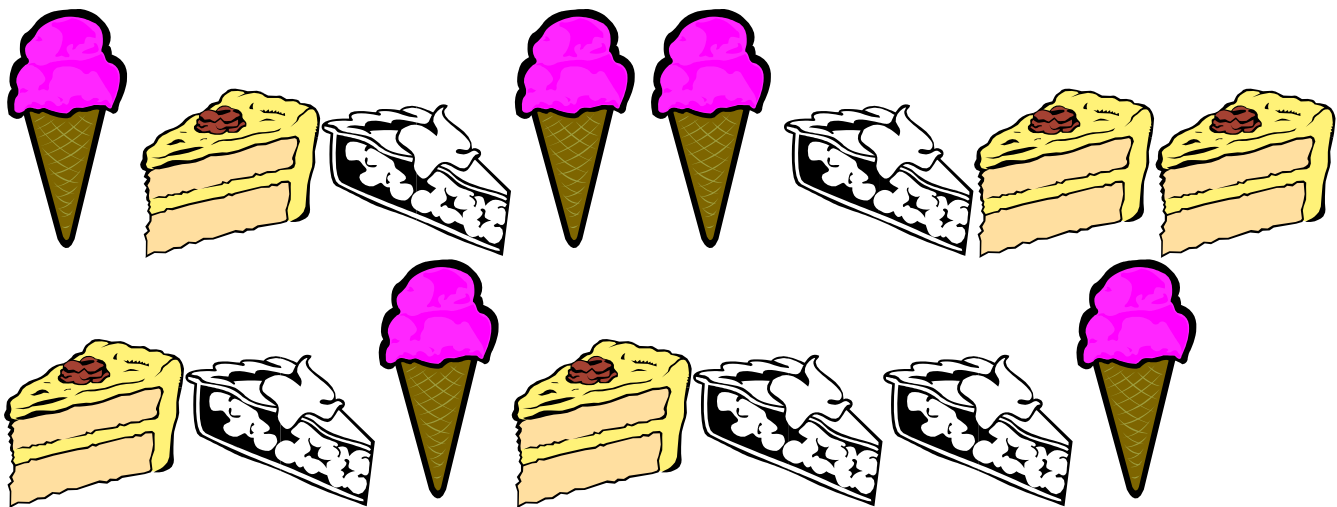
Regina used her tables to make her bar graph. She has a TITLE. Write the title here: _____ . She has drawn her axes. She has her numbers in INCREMENTS. The increments are multiples of _____ because she is counting by 2. Regina has the LABELS on each axis. The X-axis is labeled _____ and the Y-axis is labeled _____. Lastly, look at the bars Regina made. Do they have SPACE between them? Yes, they sure do. Regina did a nice job on her graph.

YOUR TURN! 😊 Go to page 5 for directions.

GREAT JOB! Just remember to do the same thing whenever you make another bar graph.

Now, let's make a picture graph. Look at the pictures below and the key to complete the picture graph.

Below are the types of desserts that third graders like best.



Complete the picture graph below using the key

Key:  = 2

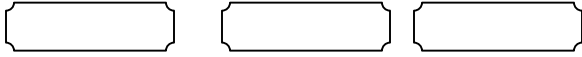
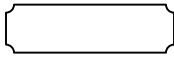
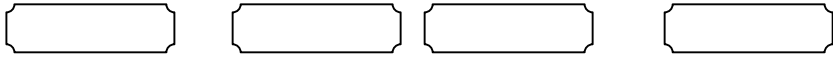

Number of Desserts


Cake	
Pie	
Ice Cream	

Now let's do some practice with reading graphs that have already been made. Take your time and you'll do great! Use your test taking strategies.

Use the pictograph to answer the questions below.

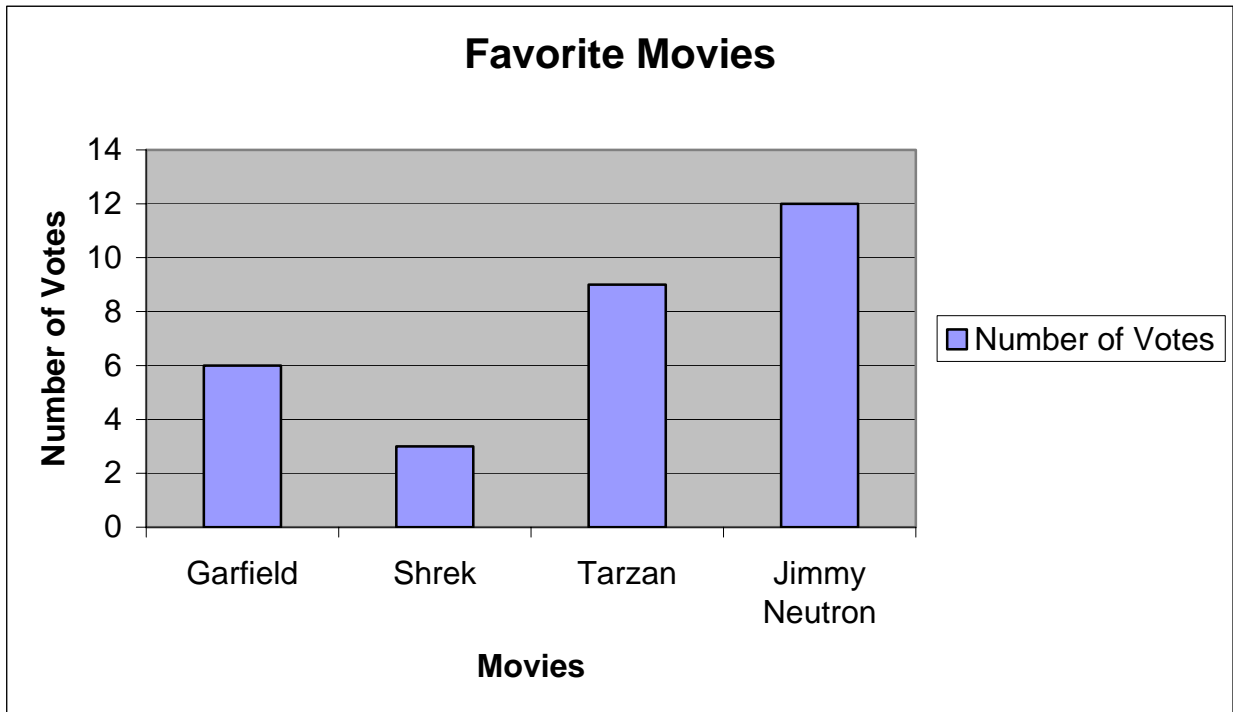
Raffle Tickets Sold

Justin	
Amanda	
Craig	
Ashley	

 = 5 tickets

1. How many tickets did Amanda sell?
 - A. 10 tickets
 - B. 5 tickets
 - C. 15 tickets
 - D. 20 tickets
2. How many tickets did Ashley and Amanda sell in all?
 - A. 5 tickets
 - B. 10 tickets
 - C. 15 tickets
 - D. 20 tickets
3. How many more tickets did Craig sell than Ashley?
 - A. 5 tickets
 - B. 10 tickets
 - C. 15 tickets
 - D. 20 tickets

Use the bar graph to answer questions 4 and 5.



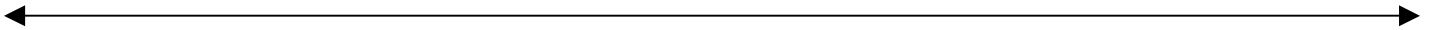
4. Which movie got the most votes?
- A. Garfield
 - B. Shrek
 - C. Tarzan
 - D. Jimmy Neutron
5. How many people voted altogether?
- A. 12 people
 - B. 24 people
 - C. 30 people
 - D. 18 people

Use the following information from the data table and create a line plot.

Ages of Sydney's Cousins

Name	Age	Name	Age
Lindsay	7	Simon	4
Paul	8	Austin	3
Sam	5	Scott	5
Jane	4	Aileen	8

Here is your line to make your line plot.



You're done! You did a great job. Follow these steps each time you create a graph and you'll be sure to have success!

Test date: _____

parent signature