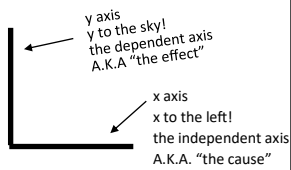


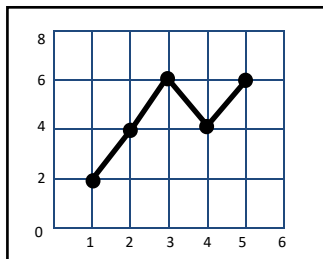
# GRAPHING NOTES

## GRAPHING REMINDERS!



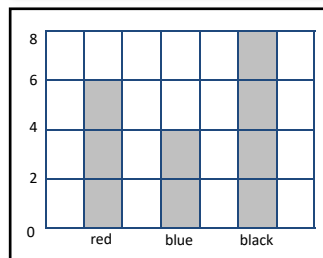
The purpose of a graph is to show a visual representation of relationships between various quantities, parameters or variables.

### 3 TYPES OF GRAPHS

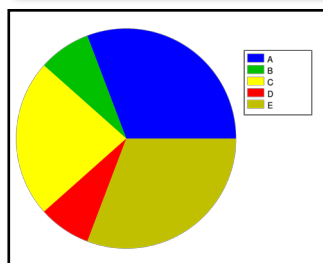


1. Line graph: A graph that uses points that are connected by lines. This graph is to be drawn so that the **independent data are on the horizontal x-axis** and the **dependent data are on the vertical y-axis**. Line graphs are used to track changes over short and long periods.

**Remember: the independent variable you choose, the dependent variable "depends" on the independent variable**



2. Bar Graph: A graph that uses bars to show comparisons between categories of data. A bar graph will have two axes and is a way to visually represent a set of data. Bar graphs are useful for data that is easy to categorize. The category is traditionally placed on the x-axis, and the values are put on the y-axis.



3. Pie Chart: A chart (or a circle chart) is a circular graphic divided into slices to display data, information, and statistics in an easy-to-read 'pie-slice' format. A pie chart with varying slice sizes will show how much of one data element exists, hence the bigger the slice, the more of that particular data was gathered. Good for percentages and fractions.

Don't worry about the pie charts - we aren't doing them

### DATA TABLE

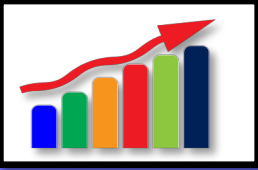
A collection of related data that is presented in columns and rows.

Data Tables are just like ratio tables and function tables (with the input and output)

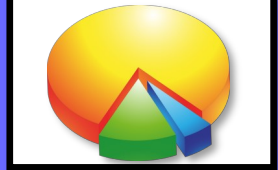
Data Table	
input	output
x	y

## ELEMENTS OF A GOOD GRAPH FOLLOW THE SULTAN METHOD

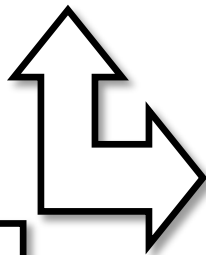
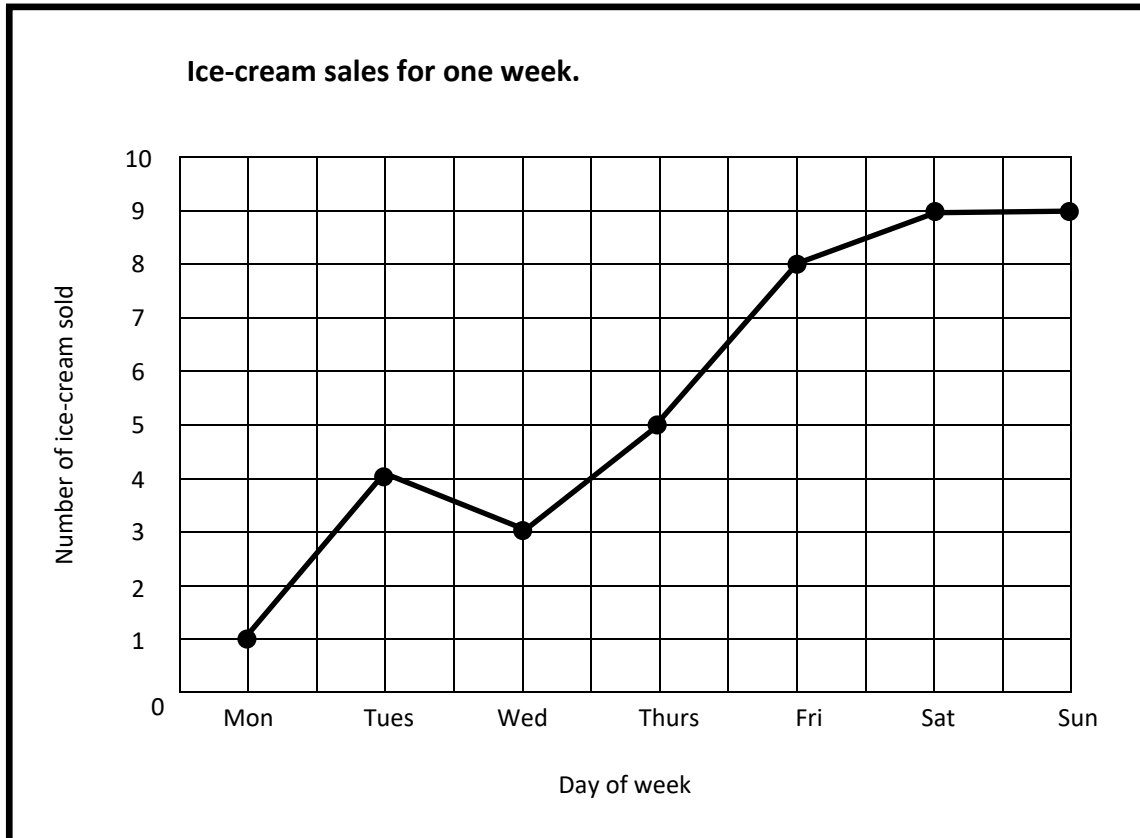
<b>S</b>	scale	Number the axes on the graph Common numbers (0,2,4,6,8) Clearly written, neat and easy to read
<b>U</b>	units	Relays what the numbers stand for Written in parenthesis Examples: (m), (s), (cm), (mL)
<b>L</b>	labels	Describes what is being measured on each axis
<b>T</b>	title	Place across top of graph Clearly states purpose of the graph Includes information about the x & y axes
<b>A</b>	accuracy	Plots points are precise Lines are drawn with a ruler
<b>N</b>	neatness	Written clearly Ruler used for lines



# STATION 1



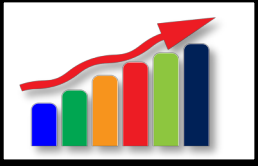
Directions: Use the line graph and data table below to answer the questions on the student handout. Use the graphing notes as a resource.



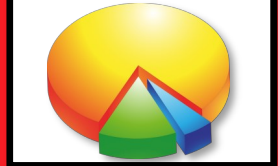
This line graph and data table display the same information but in two different formats.

**Ice-cream sales for one week.**

Day of Week	# of ice-creams sold
Monday	1
Tuesday	4
Wednesday	3
Thursday	5
Friday	8
Saturday	9
Sunday	9

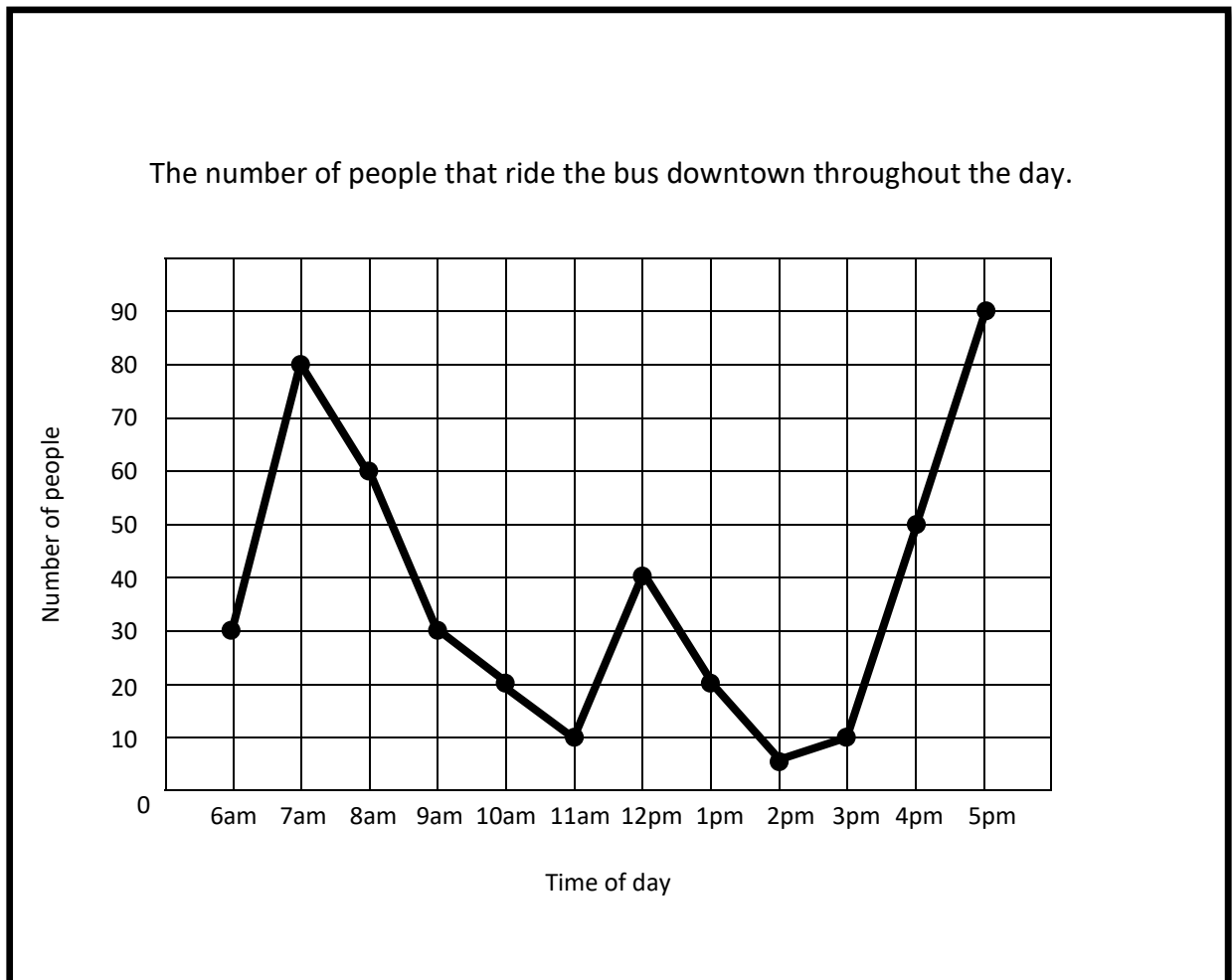


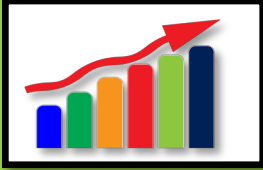
# STATION 2



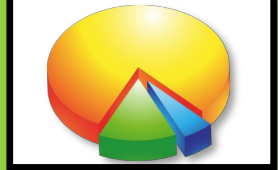
Directions: Use the line graph below and create a data table on the student handout. Use the graphing notes as a resource.

Hints: What is the graph about? How many variables are there? Which is the dependent and independent variable? From these answers create a two column data table, x versus y.





# STATION 3



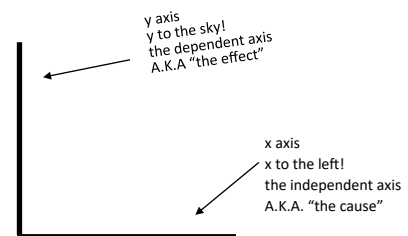
Directions: Create a bar graph on the student handout showing the milligrams of each energy drink by beverage type from the data table below. Use the graphing notes as a resource.

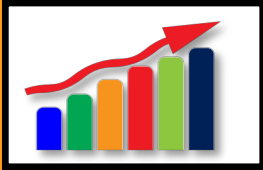
Data Table:

## ***AMOUNT OF CAFFEINE CONTAINED IN COMMON BEVERAGES.***

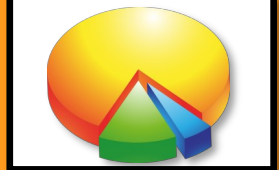
Caffeine in Drinks	Amount in energy drinks (mg)
Coke 12oz	34mg
Mountain Dew 12oz	55mg
Chocolate milk 8oz	5mg
Monster Energy 16oz	160mg
Rockstar Energy 8oz	80mg
Red Bull 8.3oz	80mg

### **GRAPHING REMINDERS!**





# STATION 4



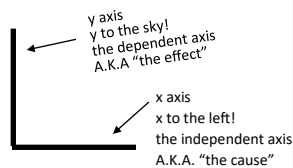
Directions: Create a line graph on the student handout that shows a comparison of low and high average temperatures by month for San Diego. Make the high in red and the low in blue. Use the graphing notes as a resource.

Data Table:

## ***AVERAGE TEMPERATURE IN SAN DIEGO***

Month	Low °F	High °F
January	49 °F	66 °F
February	52 °F	66 °F
March	54 °F	66 °F
April	56 °F	68 °F
May	60 °F	69 °F
June	63 °F	72 °F
July	66 °F	76 °F
August	67 °F	78 °F
September	66 °F	77 °F
October	61 °F	74 °F
November	54 °F	70 °F
December	50 °F	66 °F

### **GRAPHING REMINDERS!**



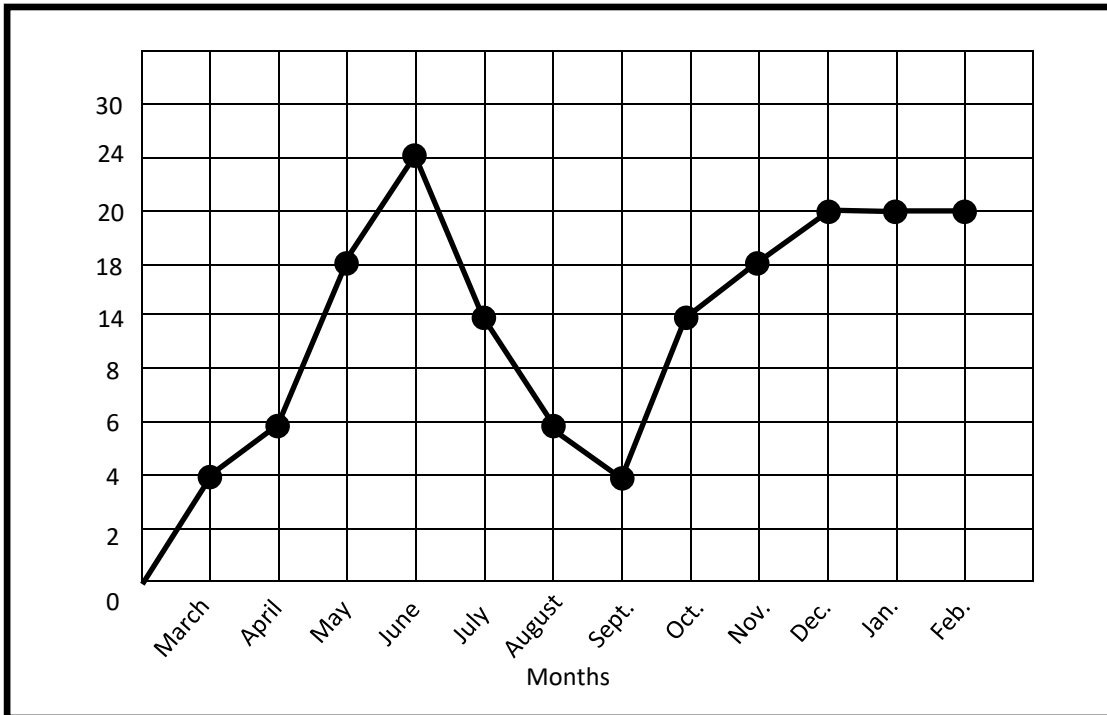


STATION 6

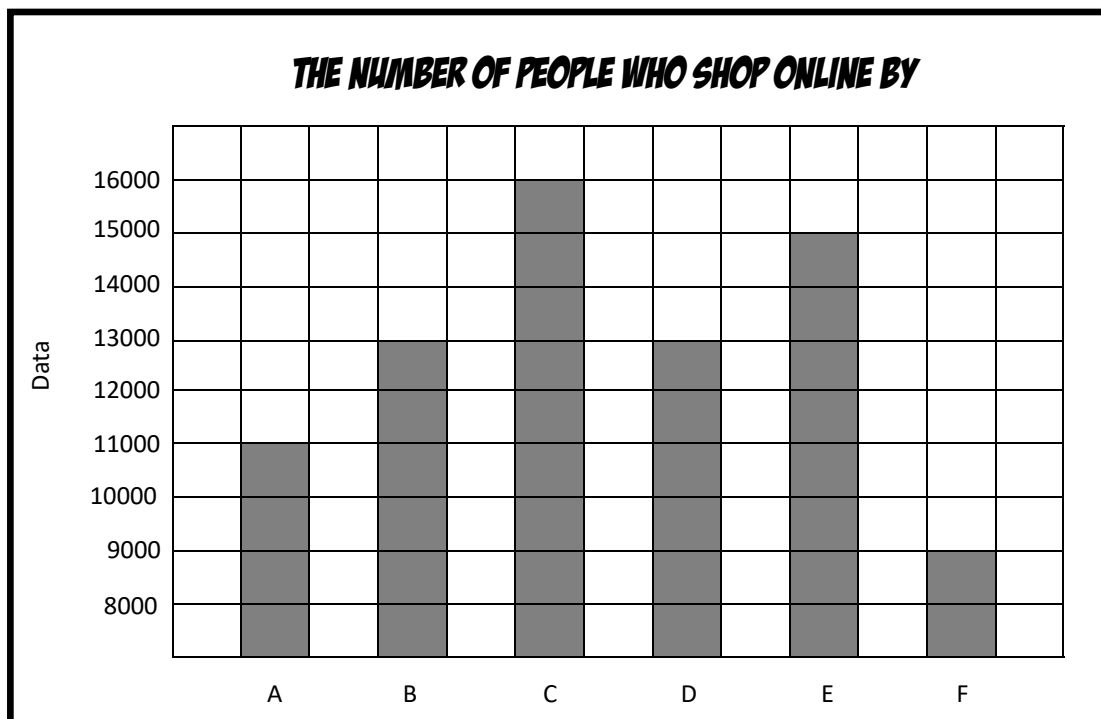


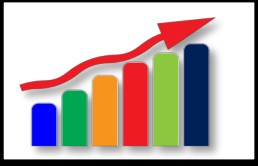
Directions: Analyze the graphs below using the SULTAN notes as a reference. Find the missing components and list them on the student handout.

1)

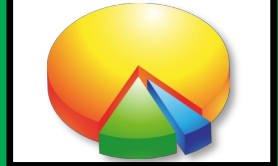


2)





# STATION 8



Directions: Using knowledge of the types of graphs and the SULTAN method, answer the questions on the student handout based on the information below. Use the graphing notes as a resource.

**CONSIDER  
THIS!**

- 1) What is the purpose of a graph?
- 2) What are the three types of graphs?
- 3) What goes across the top of a graph?
- 4) How do you demonstrate neatness when making a graph?
- 5) Give two examples of units that can be used on a graph?
- 6) Which graph would you most likely use to show fractions? Why?
- 7) Explain why each of these are important when making graphs.
  - Scale
  - Units
  - Label
  - Title
  - Accuracy
  - Neatness
- 8) What kind of graph would use for this data? The months of the year and the amount of rainfall.