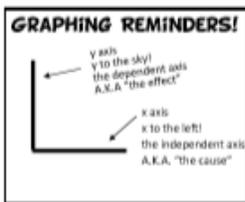


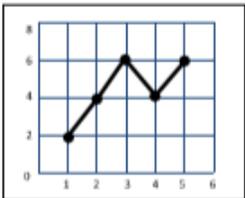
Use these notes and reminders to help you with the graphs. You will need a ruler and a pencil.



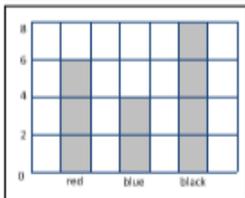
GRAPHING NOTES

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

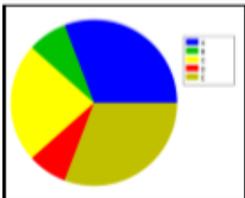
3 TYPES OF GRAPHS



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.



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.

DATA TABLE

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

Data Table

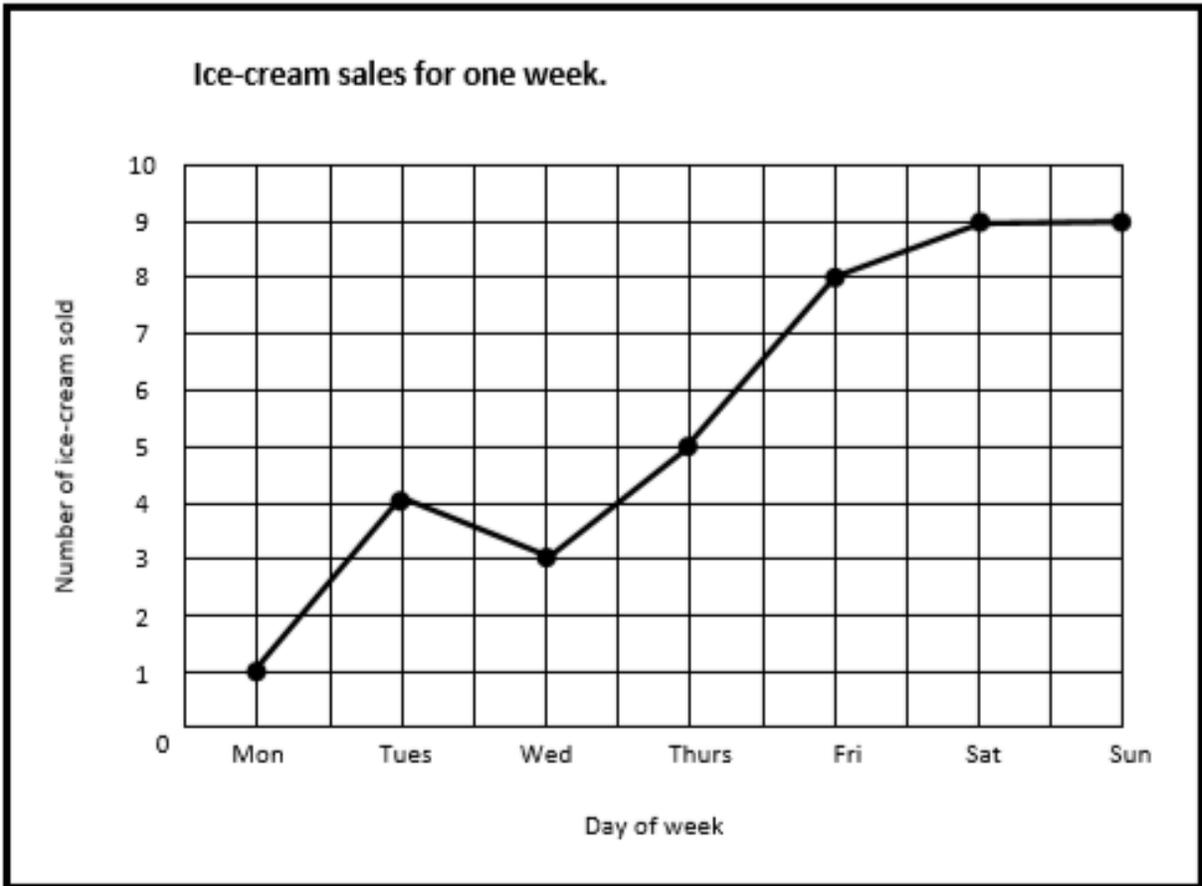
x	y

ELEMENTS OF A GOOD GRAPH FOLLOW THE SULTAN METHOD

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

Line Graph Reading

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



1) What is the title of this graph? _____

2) What variable is on the x axis? _____

3) What variable is on the y axis? _____

4) What can be inferred from this graph? _____

Line Graph Data Table

Using a ruler, create a data table to reflect the information provided on the line graph worksheet in the box below. Refer to the graphing notes to recall what a data table should look like.

Table:

ARE YOU FINISHED?

Consult the graphing notes and apply SULTAN to your data table. Check them off for completion.

- S- scale
- U- units
- L- labels
- T- title
- A- accuracy
- N- neatness

Bar Graphs

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

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

ARE YOU FINISHED?

Consult the graphing notes and apply SULTAN to your graph. Check them off for completion.

- S- scale
- U- units
- L- labels
- T- title
- A- accuracy
- N- neatness

More Data Tables

Directions: Using a ruler create a data table based on the information given for science teacher's guinea pigs. Consider the data and how many columns and rows you will need to display it.

On day 1, Mrs. Garcia's ate 65 gm, Mrs. Brody's ate 105 gm, Mr. Smith's ate 85 gm, Mrs. Nguyen's ate 93 gm, Mr. Black's ate 150gm, and Mrs. Miller's ate 97 gm. *On day 2*, Mrs. Garcia's ate 85 gm, Mrs. Brody's ate 90 gm, Mr. Smith's ate 100 gm, Mrs. Nguyen's ate 150 gm, Mr. Black's ate 85 gm, and Mrs. Miller's ate 125 gm.

Table:

--

ARE YOU FINISHED?

Consult the graphing notes and apply SULTAN to your graph. Check them off for completion.

- S- scale
- U- units
- L- labels
- T- title
- A- accuracy
- N- neatness

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) Explain why each of these are important when making graphs.

Scale _____

Labels _____

Title _____

Accuracy _____

Neatness _____

8) What kind of graph would you use for this data? The months of the year and the amount of rainfall.

- A) Bar Graph
- B) Line Graph
- C) Pie Graph