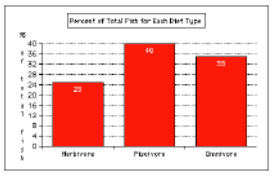
Name: Period:

Graphing Skill #1: What Type of Graph is it?

There are different types of graphs that scientists often use to display data. They include:

Bar Graphs	Line Graphs
	

Practice Problems

Based on these definitions, and the descriptions of the experiments below, please put an "X" in the box for the type of graph that would be ***most*** appropriate.

#	Description	Bar	Line
Ex	A graph showing the number of 5th graders who prefer Coke or Pepsi	X	
1	A graph showing how a newborn baby's weight changes over time		
3	A graph showing the distribution of trees of different size groups (e.g. 0-10cm, 10-20cm, etc…) in a forest		
4	A graph showing the relationship between height and arm length		
6	A graph showing the amount of rainfall, by month over a 12 month period		
7	A graph showing the number of ice cream cones purchased as a function of the day's temperature		
8	A graph showing the number of pushups done each day during a 2-week training program		

Graphing Skill #2: Labeling Axes

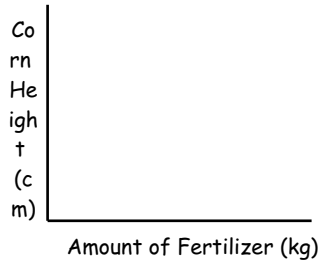
When labeling your axes, keep 3 things in mind:

- ❒ _____
- ❒ _____
- ❒ _____

Practice Problems

For each experiment described below, label the X and Y axes.

Example: A farmer wants to know if there is a relationship between the amount of fertilizer (in kilograms) she uses and how tall her corn grows (in centimeters).



Graph 1: A ball is dropped from several distances above the floor (in meters) and the height it bounces is then measured (in centimeters).

Graph 2: A candle was burned under glass jars of different volumes (in mL) to see if the volume of the jar affects the length of time (in seconds) the candle burns.

Graph 3: A fisherman used fishing lines of several different gauges (test pounds) and recorded the number of fish caught on each gauge.

Graph 4: Geologists wanted to know if there was a relationship between the density (in g/cm^3) of a rock and how many meters down it was collected from.

Graph 5: Is there a relationship between the numbers of hours a student studies and the score s/he gets on the weekly quiz?	**Graph 6:** A scientist studied the relationship between amount of rain (in cm) and the numbers of zebra babies born each spring.

Graphing Skill #3: Creating Titles

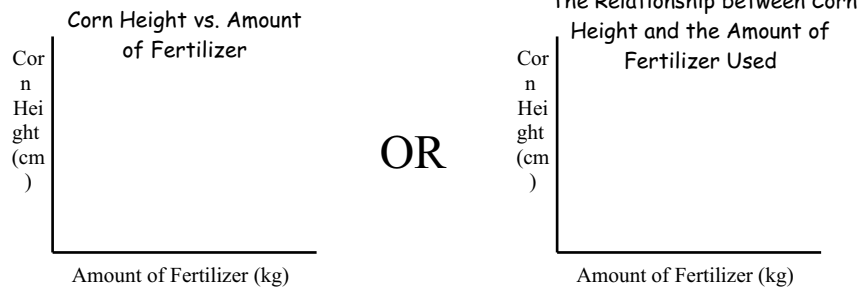
When writing a title for your graph, please remember:

- ❒ _____

_____

- ❒ _____

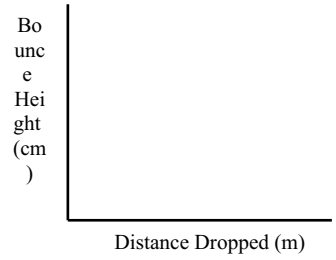
SAMPLE: A farmer wants to know if there is a relationship between the amount of fertilizer (in kilograms) she uses and how tall her corn grows (in centimeters).

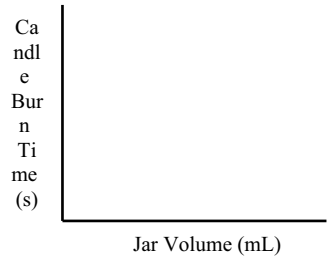


Practice Problems

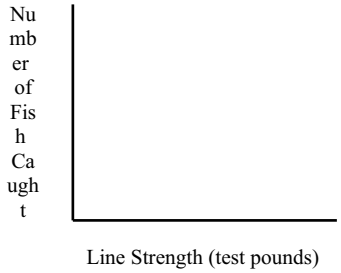
For each experiment described below, write a title for each graph

Graph 1: A ball is dropped from several distances above the floor (in meters) and the height it bounces is then measured (in centimeters).	**Graph 2:** A candle was burned under glass jars of different volumes (in ml) to see if the volume of the jar affects the length of time (in seconds) the candle burns.





Graph 3: A fisherman used fishing lines of several different gauges (test pounds) and recorded the number of fish caught on each gauge.



Graph 4: Geologists wanted to know if there was a relationship between the density of a rock and how many meters down it was collected from.

Graphing Skill #5: Plotting Points

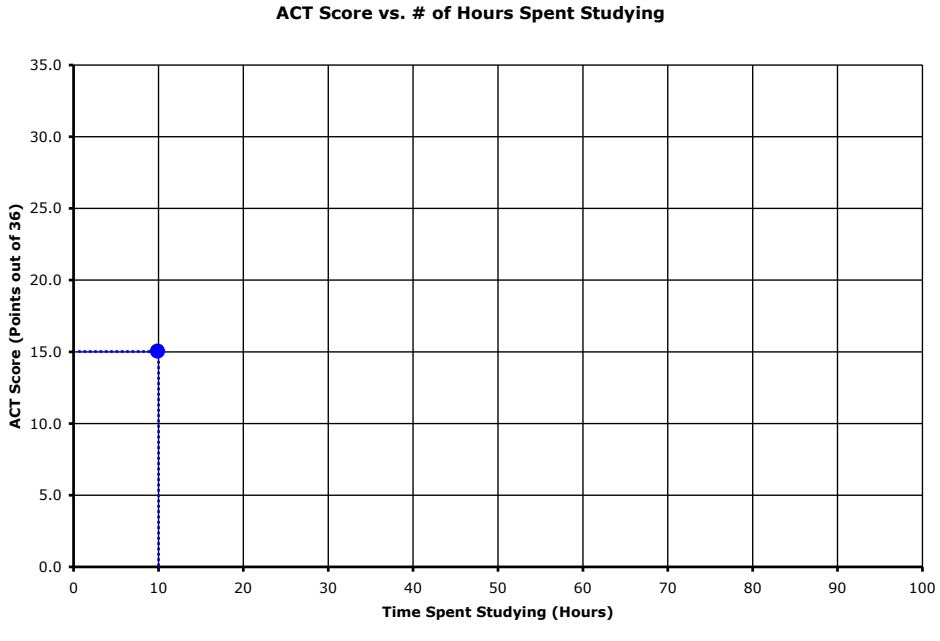
Plotting points can be easy if you follow these simple steps…

- STEP 1: Select the first pair of values from the data table (X and Y).
- STEP 2: Draw a light dashed line up from the number on the X axis and over from the number on Y axis.
  - Once you get good at plotting points, you won't need to draw these lines anymore
- STEP 3: Where these dotted lines cross, put a dark point. Repeat for the next pair of points (coordinates)

Practice Problems

Plot these points. The first pair has been plotted for you as an example.

Time Spent Studying (hours)	Score (pts)
10	15.0
20	17.0
30	19.0
40	21.0
50	23.0
60	25.0
70	27.0
80	29.0
90	31.0



Graph 2

String Length (cm)	Frequency (Hz)
10	25
20	23
30	22
40	21.5
50	20.5
60	20
70	19.5
80	19
90	16
100	15
110	14.5
120	13
130	12.5
140	12
150	11