

Labeling Graphs

Label each of the four graphs as directed.
Each label is used only once on each graph.

Objectives:

- I can perform I^2 to identify data and interpret a graph or table.
- I can read a graph to interpret data using I^2 and peer assistance.

When do you use a . . .

- Bar graph?

When comparing different groups or variables

- Line graph?

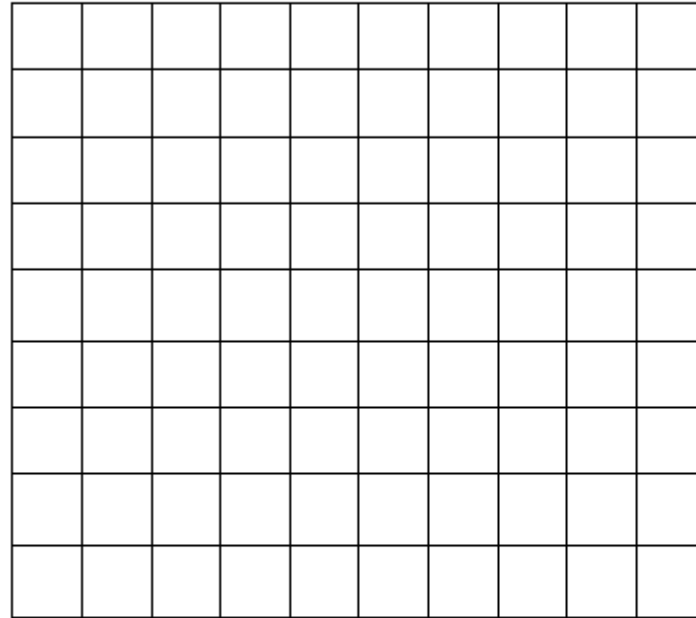
When showing a relationship between two things or what happens over time

- Pie Chart?

When looking at portions of a whole

Graphing Reminders and I²

D R Y M I X:



To **infer** means:

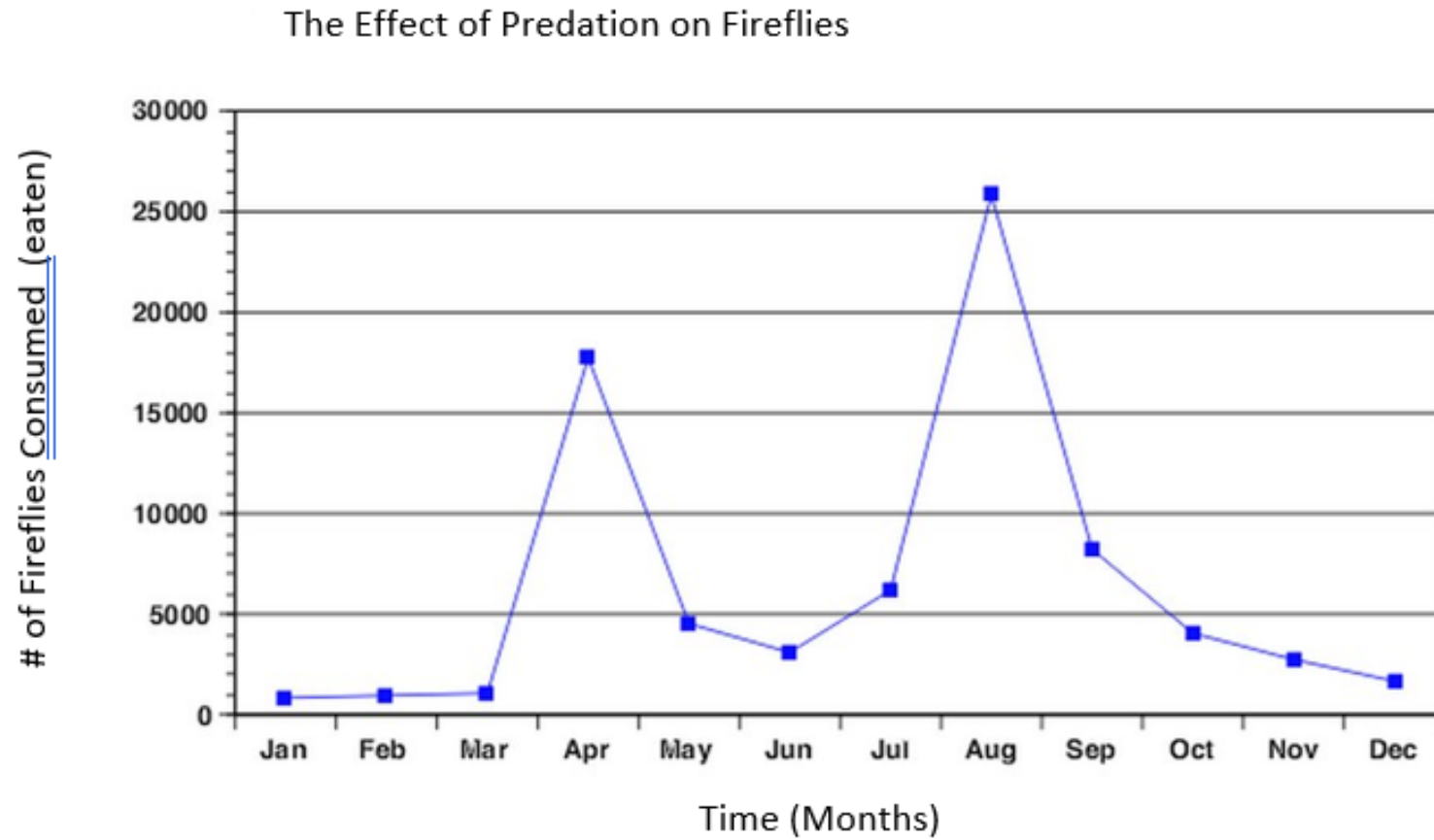
To **extrapolate** means:

Optimum means:

Detrimental means:

I² (Identify & Interpret = What do I see and what does It mean?)

Practice:



I² (Identify & Interpret = What do I see and what does It mean?)

Practice:

1. Identify the dependent variable:

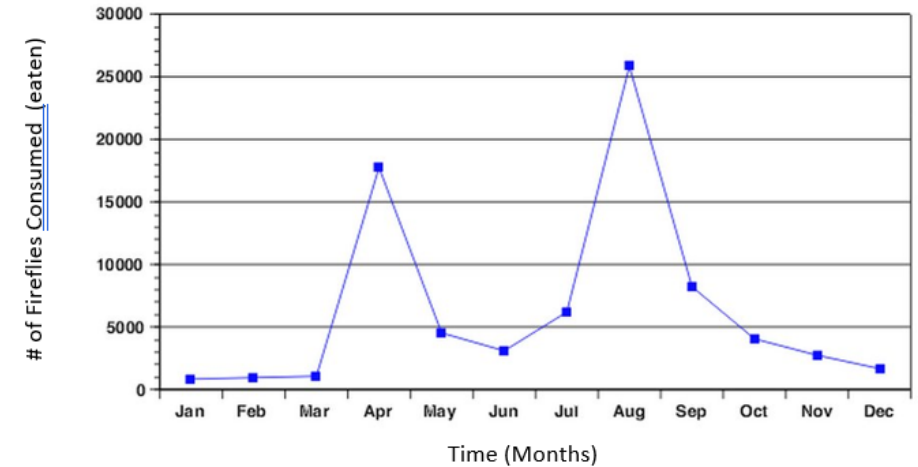
2. Identify the independent variable:

3. What is the Y axis missing?

4. What is the optimum month to be a firefly?

5. When is it most detrimental to be a firefly?

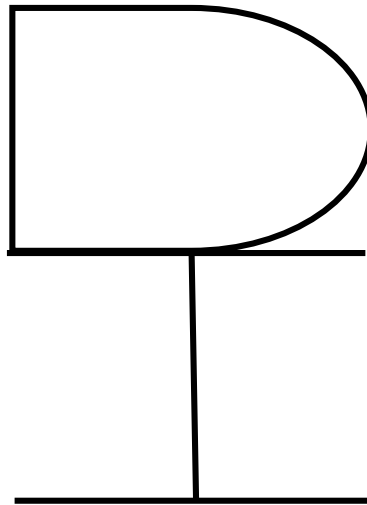
The Effect of Predation on Fireflies



Reading Graphs:

- Independent variable – changed by person doing the study
 - Bottom of graph (horizontal, X)
- Dependent variable – measured, the result of independent variable
 - Side of graph (vertical, Y)

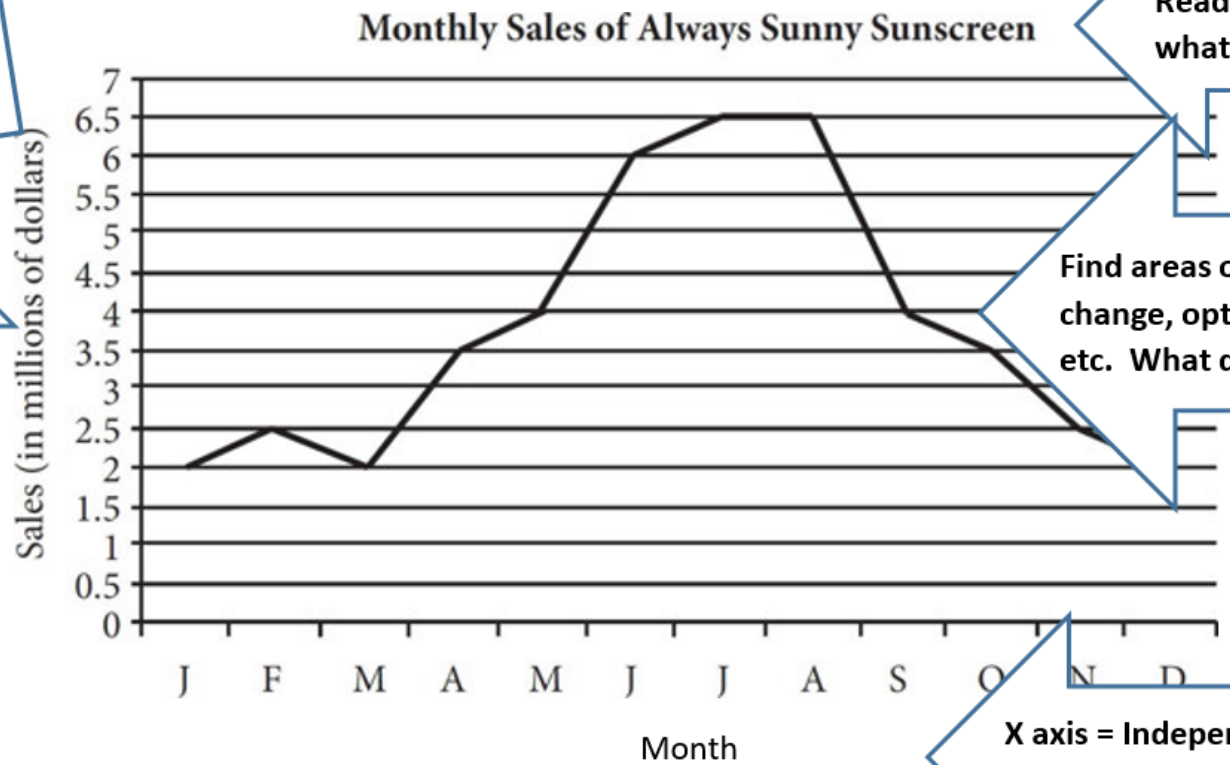
Explain this →



ANALYZING GRAPHS:

Look at the **UNITS**,
know what it is being
measured in

Y axis = dependent variable the
thing being measured/the result



Read the title to know
what the data is showing

Find areas of increase, decrease, no
change, optimal points, low points,
etc. What do these mean?

X axis = Independent Variable, the
thing you control/change

Know how to read and extract information from a graph.

How about I² on a table?

Be able to read and interpret a table.

PLANT GROWTH EXPERIMENT

Day	Average Height (in centimeters)	
	Container A: Water Only	Container B: Water plus Fertilizer
1	2.0	2.0
2	2.2	2.3
3	2.3	2.8
4	2.5	3.2
5	2.6	3.8

What was being measured?

What is the dependent variable?

What is the independent variable?

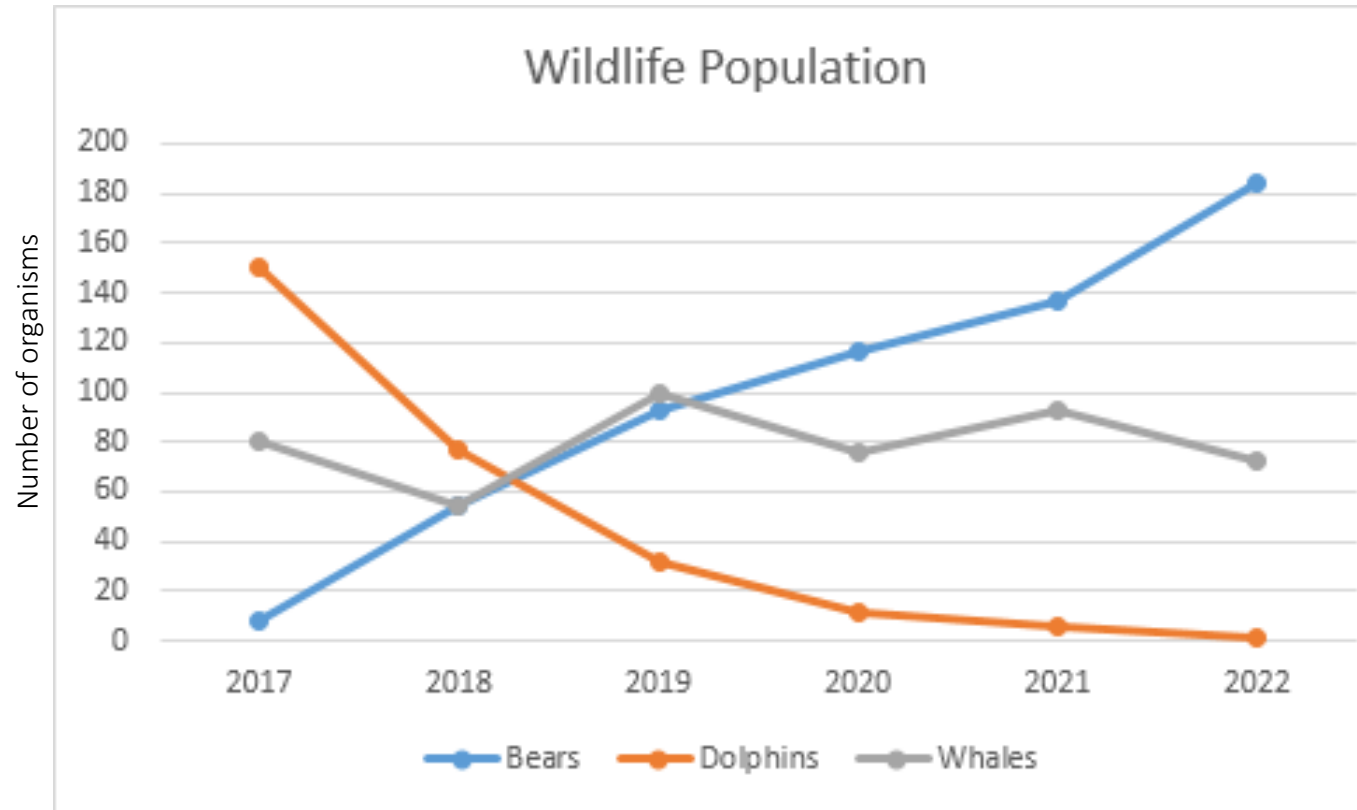
How often was the dependent variable measured?

What unit was used to measure the dependent variable?

Remember: Tables are set up differently than graphs, there is not one place to put the independent or dependent variable. You need to think about what is going on in the experiment to determine these variables.

I² the graph below then answer the questions

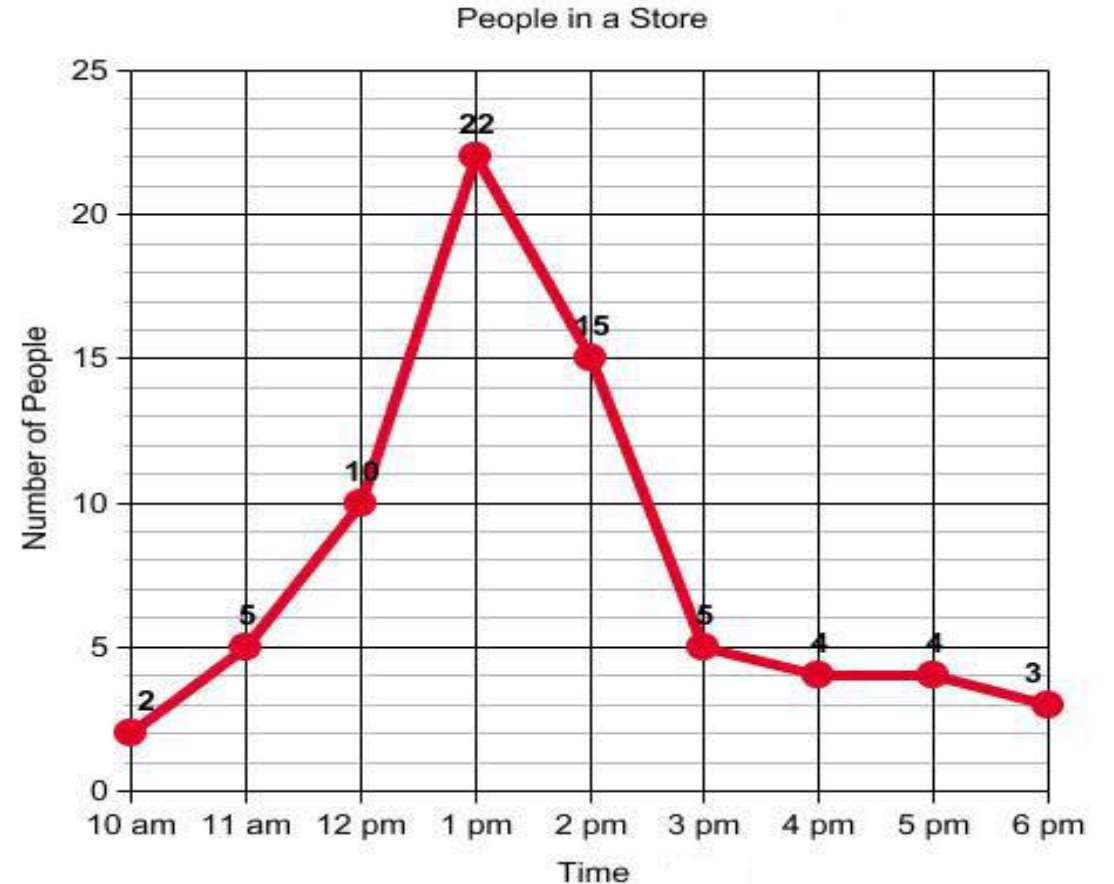
- What is the independent variable?
- What is the dependent variable?
- What is the title?
- Which population increased the most from 2017 to 2022?
- Which population had a steady decline?
- What claim can be made about the two sea mammals?



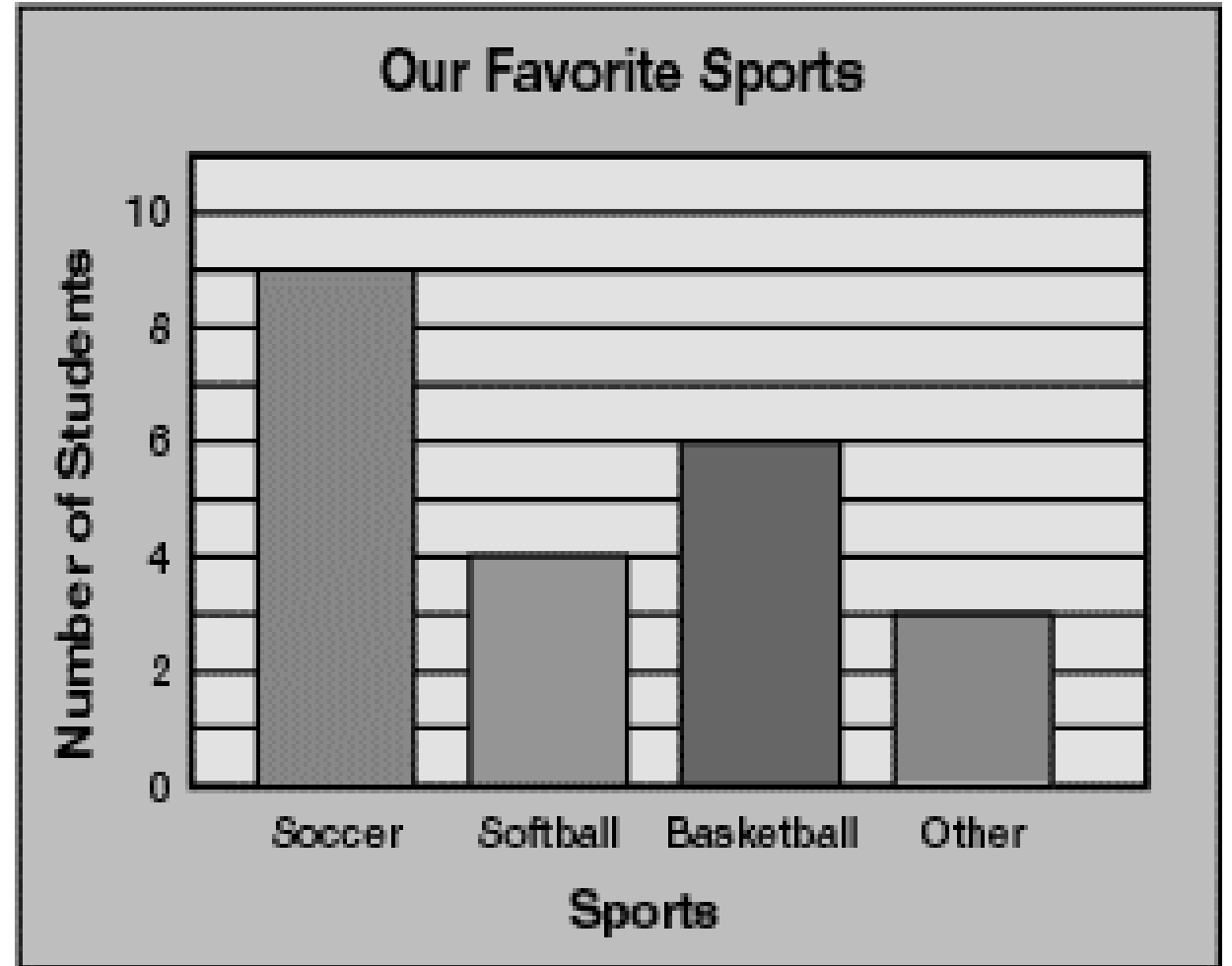
Look at the graphs on your worksheet.

- Complete the worksheet on your own. Be sure you I² the graphs. I should see notations and explanations on the graphs.
- Label the different variables and the title.
- Answer the questions on the back AFTER you I² (identify and interpret) and label the graphs.
- Let's do the first one together.

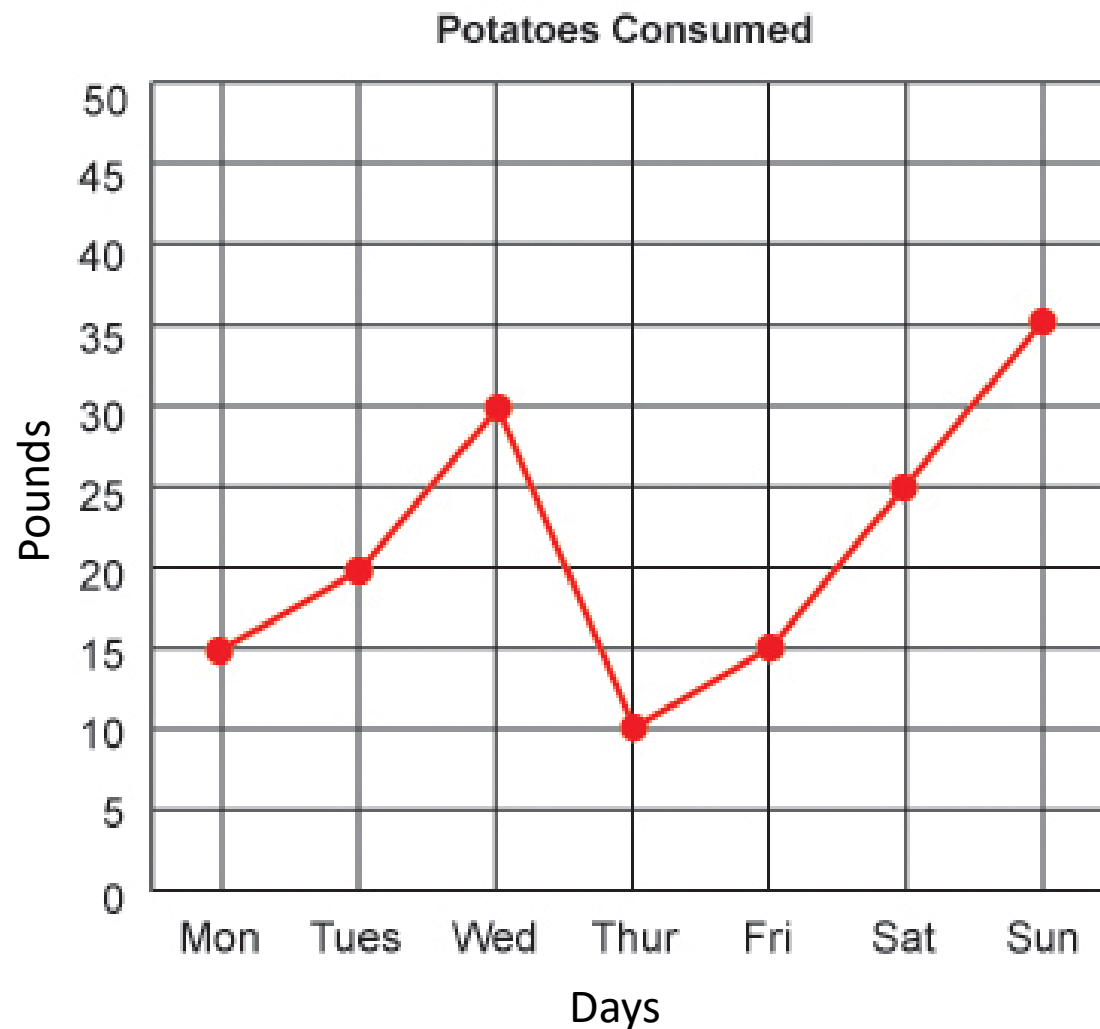
- What is the independent variable?
- What is the dependent variable?
- What is the title?
- At what time of day is the store filled with the most people?
 - How many people are there?
- How many people are in the store at 12pm?
at 2pm?
at 5pm?



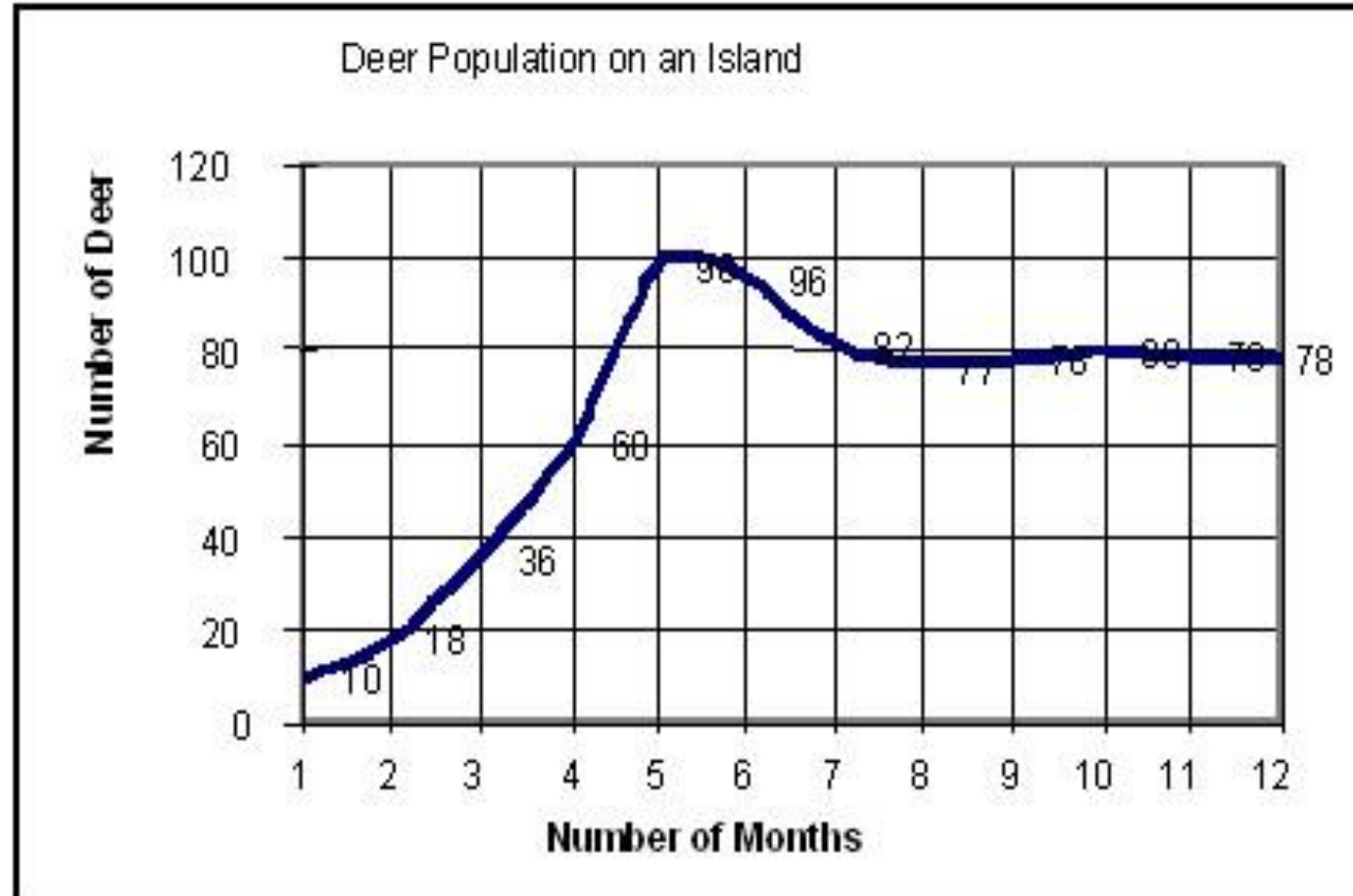
- What is the independent variable?
- What is the dependent variable?
- What is the title?
- What sport is the favorite?
 - How many students like it?
- How many students like basketball?
- How many students like basketball and softball combined?



- What is the independent variable?
- What is the dependent variable?
- What is the title?
- When does potato consumption decrease?
- On what day are the most potatoes eaten? How many?
- On what day are the least potatoes eaten? How many?



- What is the independent variable?
- What is the dependent variable?
- What is the title?
- During how many months does the deer population increase?
- Why do you think the population is increasing?
- What happens at month 5? Why?
- What happens at month 7? Why?



Tuesday 8/28/18

(Quiz on Thursday)

On your warm up paper, identify the variables and constants in the following experiment. PLEASE do this on your own. Do NOT share your answers:

One tank of gold fish is fed the normal amount of food once a day. A second tank is fed twice a day. A third tank is fed four times a day during a six week study. The fish's weight is recoded daily.

Independent Variable: _____

Dependent Variable: _____

THREE Constants: _____

Wednesday 8/29/18 (quiz tomorrow)
Complete the warmup below:

Be able to read and interpret a table.

PLANT GROWTH EXPERIMENT

Day	Average Height (in centimeters)	
	Container A: Water Only	Container B: Water plus Fertilizer
1	2.0	2.0
2	2.2	2.3
3	2.3	2.8
4	2.5	3.2
5	2.6	3.8

What was being measured?

What is the dependent variable?

What is the independent variable?

How often was the dependent variable measured?

What unit was used to measure the dependent variable?

Remember: Tables are set up differently than graphs, there is not one place to put the independent or dependent variable. You need to think about what is going on in the experiment to determine these variables.