

ORGANIZING AND ANALYZING DATA

Making Line Graphs

Line graphs are useful for showing a relationship between variables. They should be used to show how variables change over time, or when there is a continuous relationship between the independent variable and the dependent variable. Data presented with a line graph can depend on each other from one measurement to the next. You can also use more than one line on the same graph to show more than one set of data.

How to make a line graph:

- Place the dependent variable on the vertical axis, or y -axis.
- Place the independent variable on the horizontal axis, or x -axis.
- Choose scales for both axes of the graph. You should have two points more than you need on the y -axis, and the x -axis should be long enough for all of the data points to fit.
- Draw and label each axis. Mark intervals on both axes according to the scales you choose.
- Plot each value as a point on the graph.
- Connect the points with straight lines.
- Be sure to give your graph a number and a title.
- When you make a double line graph, use different colors or styles of lines to distinguish the different sets of data.
- Be sure to include a key to indicate what the different colors or lines mean.

1. Fill in the data table using information from the double line graph below.

Figure 1. Population Model

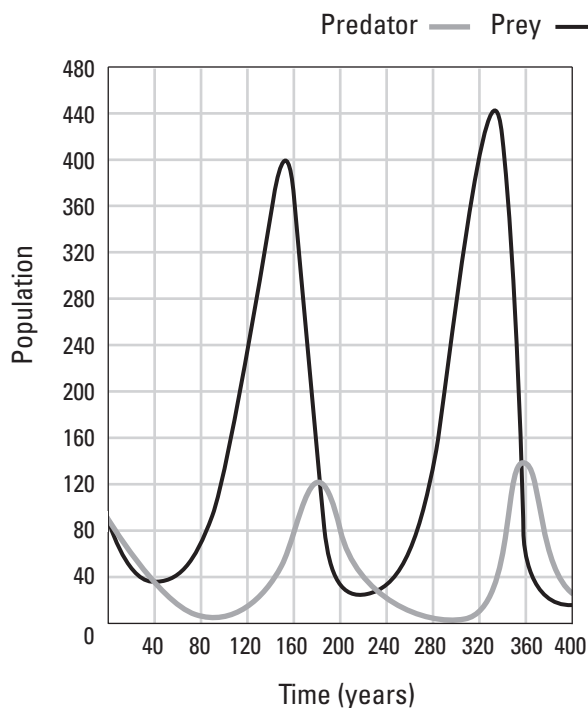


Table 1. Population Model

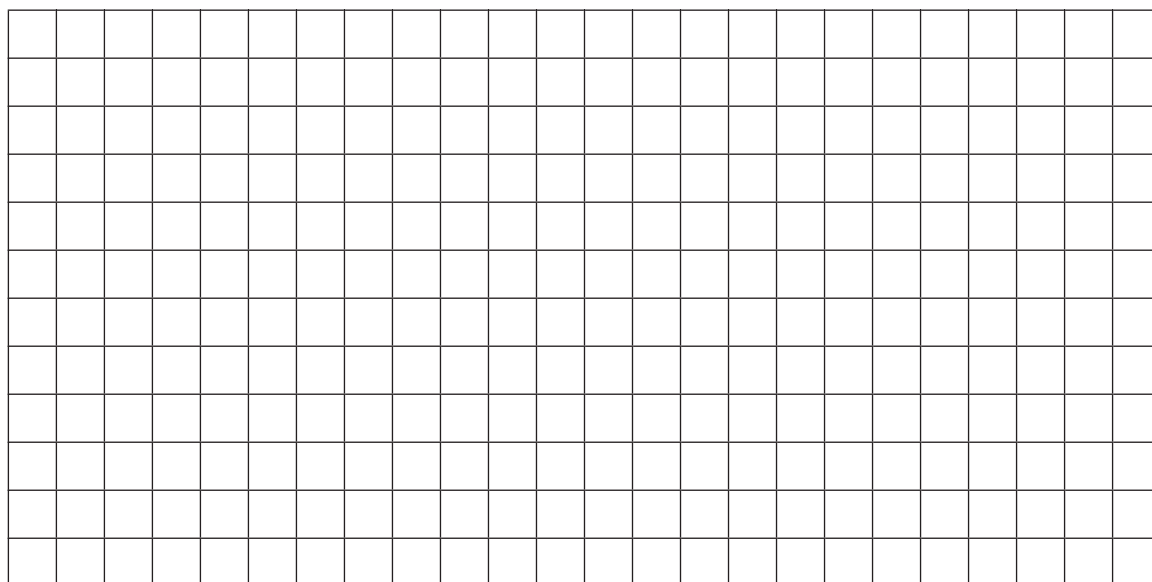
Time (years)	Predator Population	Prey Population
0		
40		
80		
120		
160		
200		
240		
280		
320		
360		
400		

Name**Period****Date**

2. Use the data in the table below to make a double line graph that presents the same information. Remember to include a key that indicates what different lines represent. Also remember to add a number and a title to the graph.

Table 1. Average Monthly Temperatures (°C) in Beijing, China and Valdivia, Chile

Location	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
Beijing, China	-4	-2	2	14	20	24	26	24	20	12	2	-2
Valdivia, Chile	16	15	14	12	10	8	7	8	9	11	13	15



Challenge Valdivia, Chile and Beijing, China have the same average yearly temperature (11.7°C). Based on this information, what are the advantages of displaying two data sets on the same graph?
