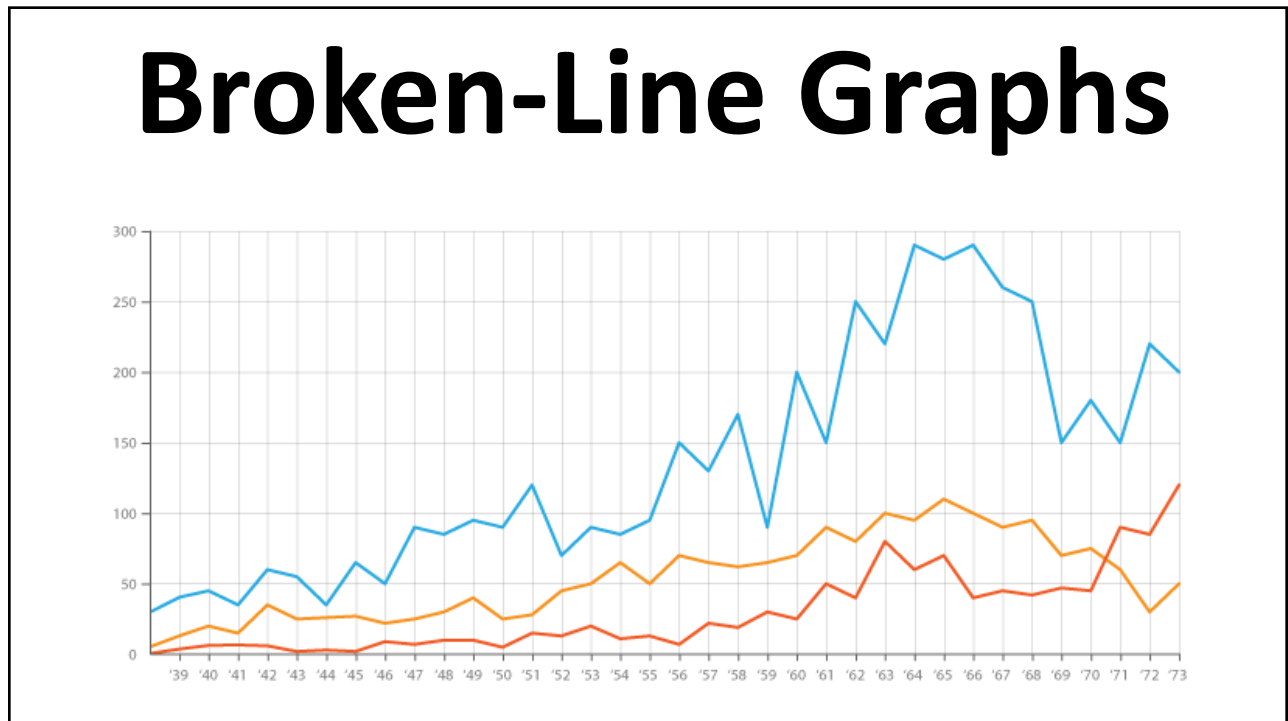


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## How to Make a Broken-Line Graph

To construct a broken-line graph, complete the following steps.

- 1) Plan, draw and label the vertical and horizontal scale. You must start from zero on both axes and choose a consistent scale for each axis as to best utilize the graph paper.
  - ✓ Hint: look at the data and see what the maximum values are. Then count the number grid spaces for each axis and divide the highest data value by the number spaces to get an approximate value for your spacing. Round this value up to nice number easy use (2's, 5.s, 10s, etc...avoid weird numbers like 7's, 11,'s, etc...)
  - ✓ It is not necessary to label every line with a number as it may get cluttered and hard to read.
- 2) Next, plot the points of data. To do this, find the values on each axis and where they meet, draw a small point.
- 3) When all the points are plotted, connect them in sequential order **WITH A RULER**. Do not try to make the line one straight line. It is a series of line segments between each dot.
- 4) Finally, write a title for the graph that describes what the graph is illustrating.

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## Sample Problem – Broken-Line Graph

Jacob owns a small appliance repair company. He tracked the company's net profits over a 10-year period. He is examining the data to see if there is a trend and to decide if he can increase the salaries of his employees.

<b>COMPANY'S NET PROFIT, 2000–2009</b>										
<i>Year</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>
Profit (thousands of dollars)	5	15	18	35	40	38	42	20	58	65

- a) Graph the data on a broken line graph.
- b) Is there a general trend in the data? If so, what is it? Are there any exceptions to the trend?

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## Sample Problem – Broken-Line Graph

The following graph shows the growth rate of a bean plant that David planted in his vegetable garden.

- David forgot to record the height of the bean plant in Week 4. Use the graph to interpolate the height of the plant that week.
- What might the height of the plant be in Week 12?
- Write a statement describing trends in the bean plant's growth rate from Week 0 to Week 11.

