

Graphs

In many courses in your degree you will need to construct graphs or tables, insert them correctly into assignments and refer to them in your written material. Graphs should be self-explanatory, which means that the reader should be able to understand them without detailed reference to the text. Here are a few guidelines for creating graphs.

1. All graphs in a given text must be sequentially labeled: that is, the first graph in a document should be labeled as Figure 1, the second graph as Figure 2 etc. Figures should also be introduced in the text prior to appearing.
2. The title should be informative and to-the-point, usually including information relating to the horizontal and vertical variables.
3. The horizontal and vertical axes must be labeled, including any units of measure.
4. Before plotting a graph, you must decide which variable is the *independent* variable. This variable is usually assigned to the horizontal axis. Table 1 shows examples of different relationships and their independent variables.

Table 1: relationships and the independent variable

<i>Relationship</i>	<i>Independent variable</i>
$y = x^2 + 2x + 3$	x
Cost = \$100 + \$30 per person × Number of people	Number of people
Change in salaries with time	Time
Affect of hours spent studying on final grade	Hours spent studying

5. Keep a fixed scale on the axes. Compare Figures 1(a) and 1(b): Figure 1(a) shows an incorrect graph, as the scale on the horizontal axis is not uniform, unlike the correct graph in Figure 1(b).

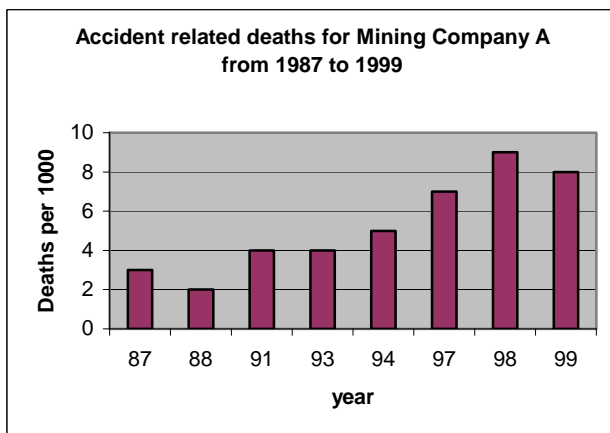


Figure 1(a): Incorrect graph as the years with zero death-rate have been ignored

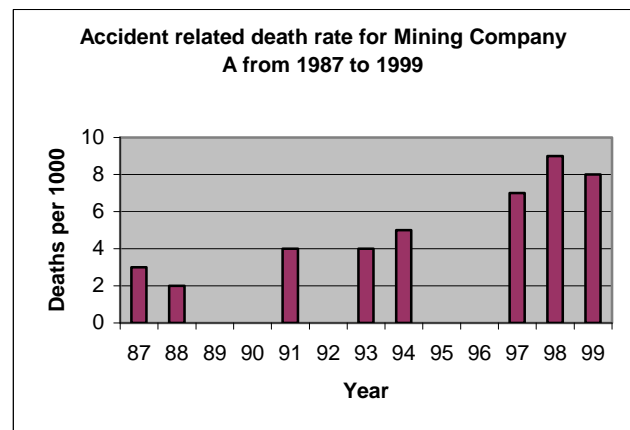


Figure 1(b): Correct graph as this graph reflects the years where there is zero death-rate.

