

DISPLAYING DATA IN APPROPRIATE GRAPHS

Graphs are visual ways to summarize data. Some data is better displayed in a circle graph while other data is most effectively displayed in a line graph. We'll take a look at a summary of the types of graphs and the displaying data in appropriate graphs.

Displaying Data in Appropriate Graphs

A summary of types of graphs and their uses is provided in the chart below.

Type of Graph	Description	Use
Line	A graph that uses lines to show changes in data	Shows how data changes over a period of time
Bar	A graph that uses bars to display data	Compares data, usually have a number per category
Pie	A graph that uses a circle to display data	Compares data, usually is the results of a survey of a whole amount
Scatter Plot	Dots or symbols that represent clusters of data	Displays the results of a collection of data
Histogram	A graph that uses touching bars to represent intervals	Displays the frequency of intervals of data
Box-and-whisker plots	A graph that uses lines and boxes to show the distribution of the data	Displays the results of a collection of data

Sample uses of graphs are displayed below.

A **line** graph can be used to show the **rise in cost** of a brand name of tennis shoes over the past three years.

A **bar** graph can be used to show the number of tennis shoes per store comparing the sales in four different stores.

A **pie** graph can be used to show the results of a **survey** which type of tennis shoe is the most popular.

A **scatter plot** can be used to show the **number** of pairs of tennis shoes sold per hour over a 3 hour period.

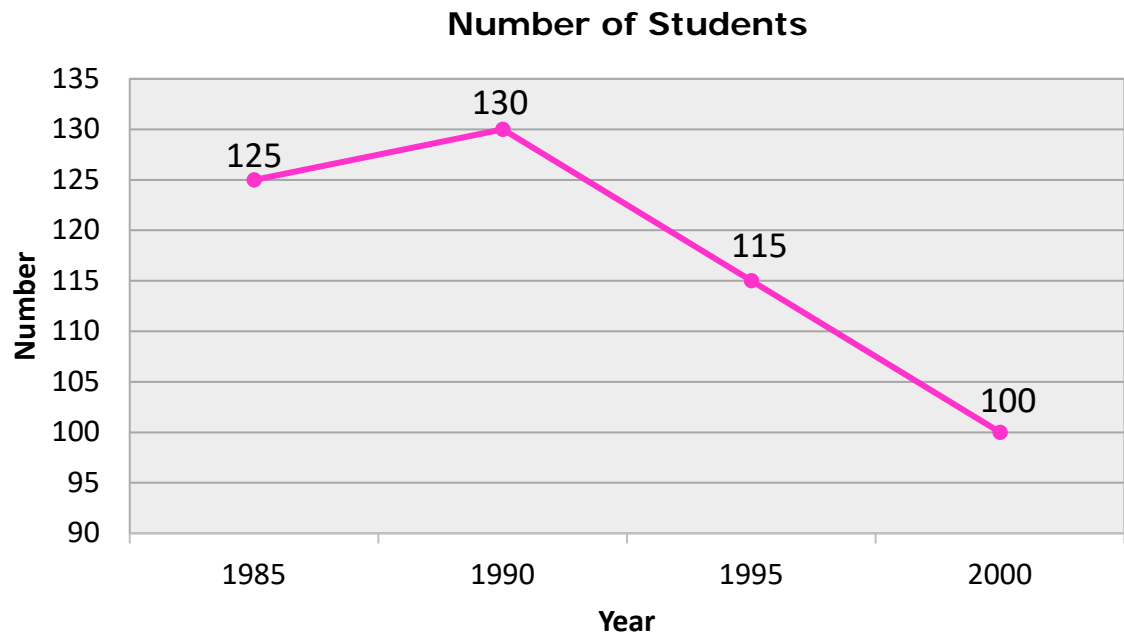
A **histogram** can be used to show the **frequency** of the birthday months for all the students in a class.

A **box-and-whisker plot** can be used to show the **mean, median, mode, range, quartiles and outliers** for the number of tennis shoes sold.

Let's take a look at some data and the resulting appropriate graphs.

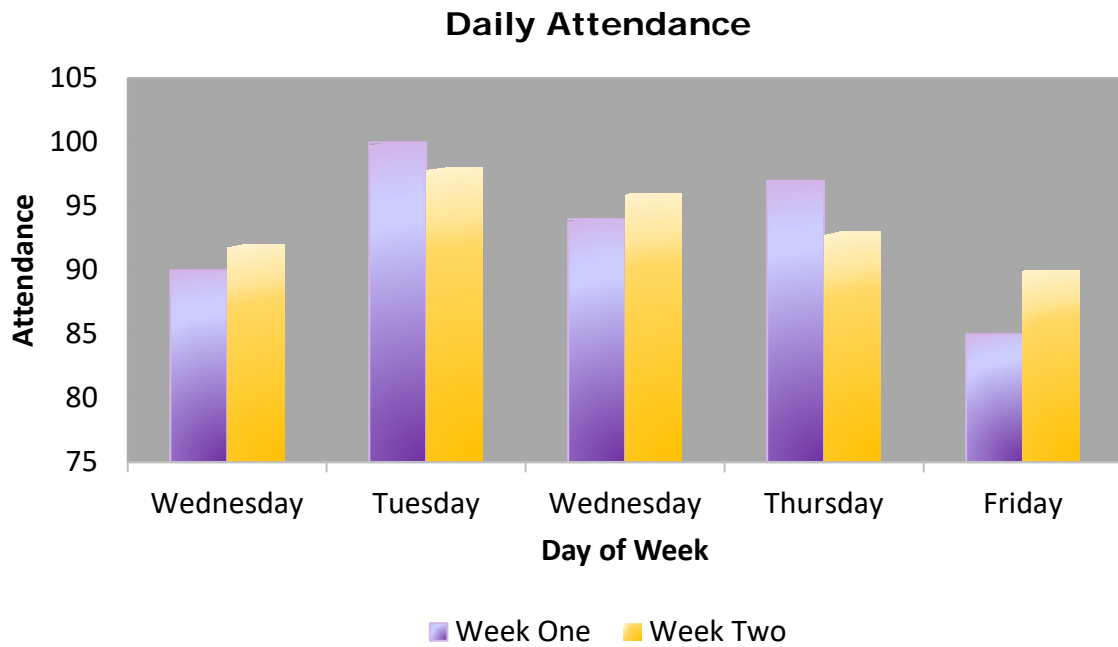
Beth is examining the student enrollment in her school's 6th grade class. She started with the year 1985 and made a line graph to look for a trend for the enrollment at her school. The line graph displayed that there is an overall gradual decline in enrollment.

Number of Students in 6 th Grade Class	
Year	Number
1985	125
1990	130
1995	115
2000	100



Beth is examining the daily attendance of here 6th grade class. She wanted to see which day of school students attend best. She selected a bar graph to compare the data for two weeks. She found that the daily attendance was best on Tuesday.

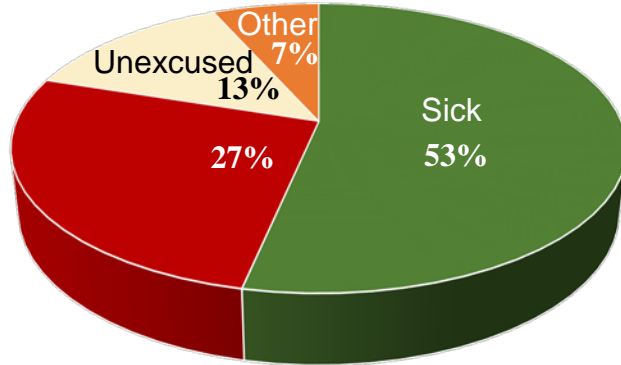
Daily Attendance of 6 th Grade Class		
	Week One	Week Two
Monday	90	92
Tuesday	100	98
Wednesday	94	96
Thursday	97	93
Friday	85	90



Beth is examining the reasons for student absences on Friday. She decided to display the information in a circle graph to show percentages of the whole group.

Reasons for Absences

Reasons for Absences	
Sick	8
Doctor's Appointment	4
Unexcused	2
Other	1



Beth has the number of students that attend school for the past two weeks. She decides to display the data in a box-and-whisker plot.

90, 100, 94, 97, 85, 95, 96, 85, 99, 86

