

SECTION 6

Example 6

Here is the outdoor pursuits data again.

This time, draw a percentage component bar chart to show the information.

	1995	1996	1997
Climbing	21	34	30
Caving	10	12	21
Walking	75	85	100
Sailing	36	36	40
Total	142	167	191

Solution:

To draw a percentage component bar chart we have to express each number as a percentage of the total for that year.

A reminder:

$$\text{For 1995, climbing} = \frac{21}{142} \times 100\% = 14.8\%$$

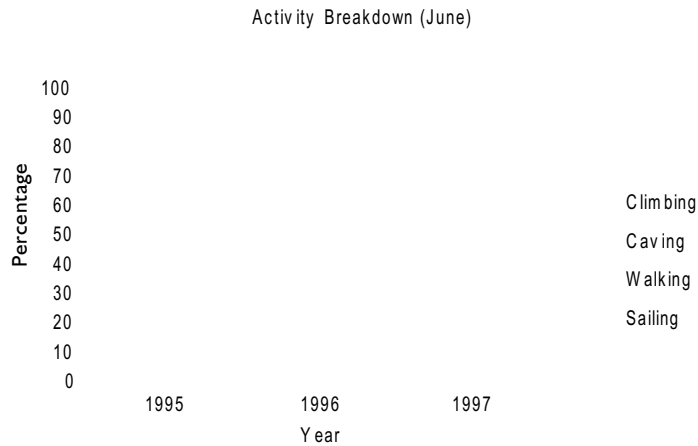
We now do this for all the components and draw the required chart.

Note that each column stretches from 0 to 100%. We can only plot whole numbers of percentages because the scale cannot cope with greater accuracy, but that shouldn't stop us from calculating them to one decimal place (or more if we feel so inclined).

Notice that my table (below) has an extra column in it for each year – I'm doing a running total for the percentages so that I know where to 'draw the line', so to speak, for each component. It's easier having this sort of thing written down than carrying it in your head.

	1995	1995 %	Draw line at	1996	1996 %	Draw line at	1997	1997 %	Draw line at
Climbing	21	14.8%	15%	34	20.4%	20%	30	15.7%	16%
Caving	10	7.0%	22%	12	7.2%	28%	21	11.0%	27%
Walking	75	52.8%	75%	85	50.9%	79%	100	52.4%	79%
Sailing	36	25.4%		167	21.6%		40	20.9%	
Total	142	100.0%		167	100.0%		191	100.0%	

The chart looks like this:



This chart shows, for instance, that although the numbers of people sailing increased slightly (see the ordinary component chart on page 15, which shows the sailing component getting bigger), the percentage chart shows that the numbers of people sailing as a proportion (i.e. a percentage) of the total actually went down a bit.

Sailing was not as popular in 1997, when compared with the other sports, as it was in 1995.

This is where a percentage component chart scores, when you are looking for a comparison rather than an actual figure.

? 6

Draw percentage component charts for the two questions in Exercise 5 on page 16.