



Interpreting data

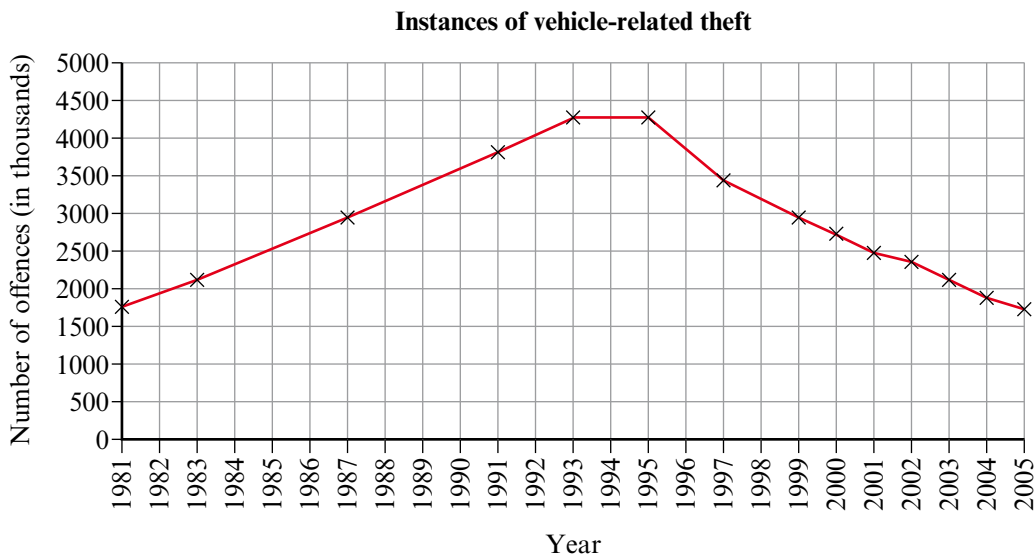
- Interpreting different types of graph
- Giving reasons to justify your answers
- Deciding whether a graph displays its data clearly

Keywords

You should know

explanation 1

- 1 This graph shows crime statistics for vehicle theft since 1981.



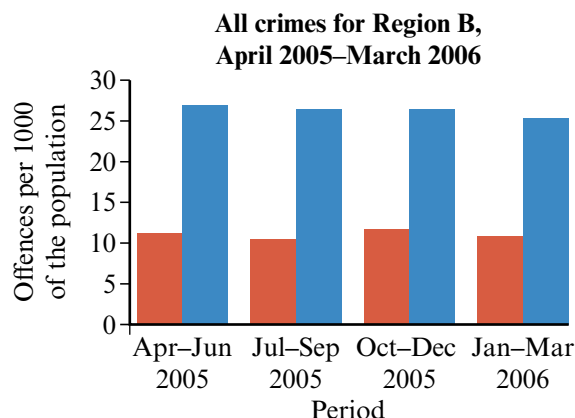
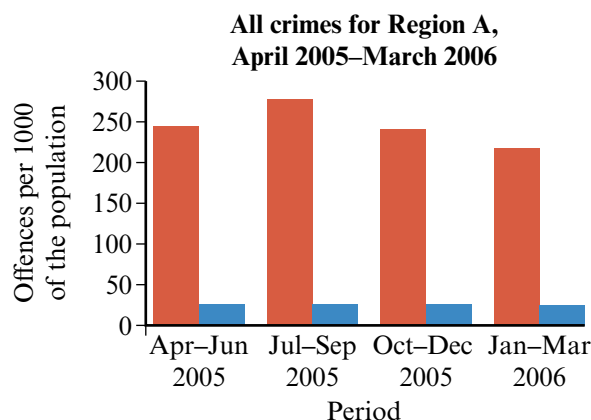
- Approximately how many vehicle-related thefts were reported in 2005?
- Which years showed the highest theft figures?
- Write a short paragraph describing what the graph shows.
- Give a possible reason for the drop in vehicle-related thefts since 1995.
- This comment was made about the graph.

Although the number of car crimes was the same in 2005 as it was in 1981, in real terms, compared to the number of cars, this indicates a drop in car crime.'

Explain in your own words what you think this means.

- 2** The graphs show the overall crime figures between April 2005 and March 2006 for Region A and Region B compared to the national averages.

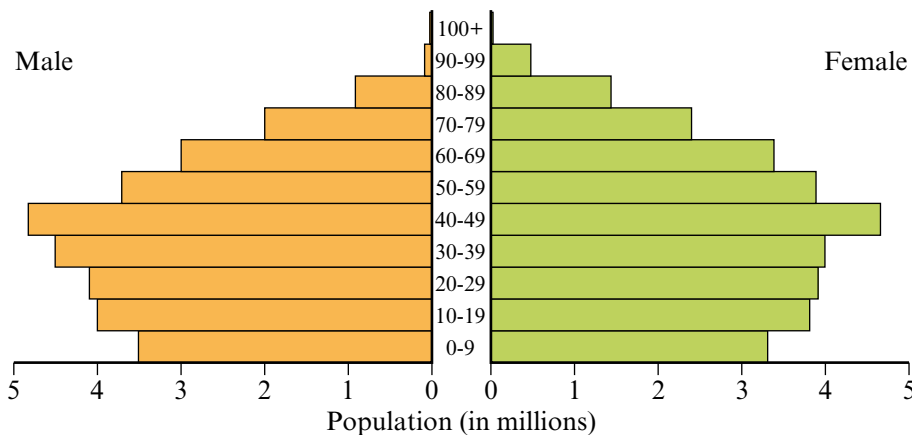
Key ■ Chosen Region
■ National average



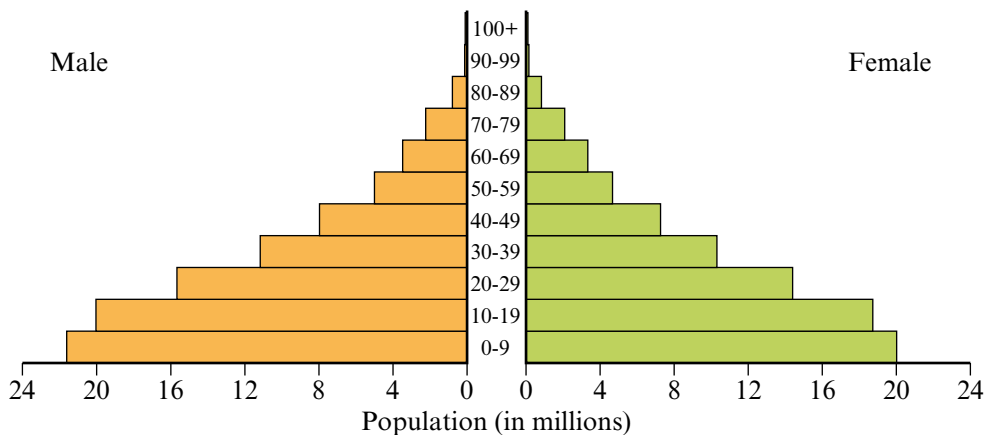
- a** Approximately how many offences on average were committed per thousand of the population nationally between January and March 2006?
- b** Approximately how many offences were committed per thousand of the population in Region B between January and March 2006?
- c** Approximately how many offences were committed per thousand of the population in Region A between January and March 2006?
- d** Write a short paragraph describing any similarities and differences between the crime figures for the two regions.
- e** Explain whether you think the graphs are clear. Justify your answer.
- f** The y-axis on both graphs represents ‘offences per 1000 of the population’. Explain in your own words what this means.
- g** In Region A between April and June 2005, the number of offences per 1000 of the population was approximately 250. Does this mean that nearly $\frac{1}{4}$ of the population of Region A committed an offence during that time?

- 3** These graphs show the 2007 population pyramids for two countries. The numbers in the middle of the pyramid represent the ages of the population.

Population pyramid for a country in Europe

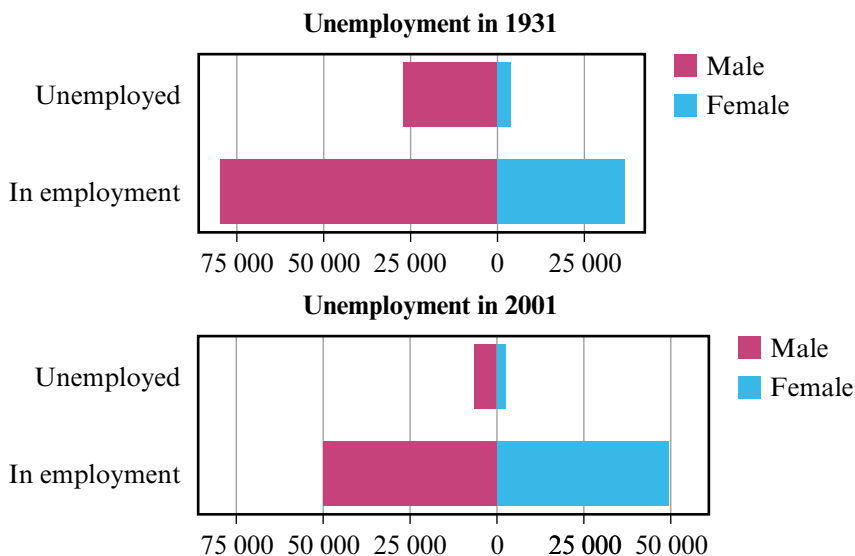


Population pyramid for a country in Asia

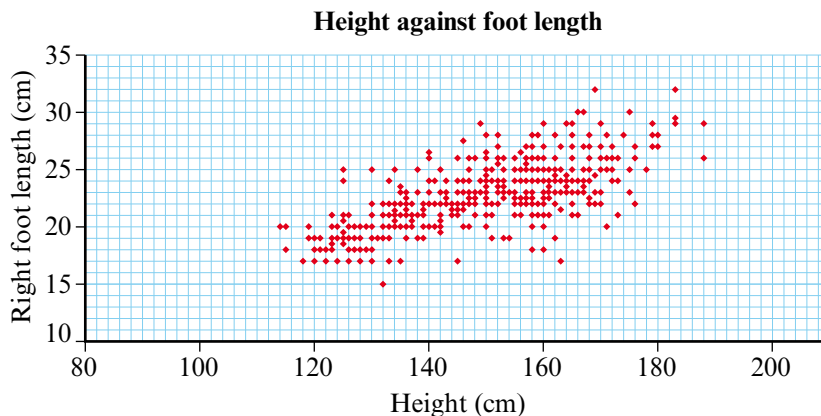


- When you look quickly at the graphs you might believe that there are more people in the European country than the Asian country. Explain how you think this mistake could occur.
- Approximately how many 0–9 year old girls were there in the Asian country in 2007?
- Approximately how many 0–9 year old girls were there in the European country in 2007?
- In the Asian country which age group had the most people?
- In the European country which age group had the most people?
- Write a short paragraph describing some of the differences and similarities between the two graphs.

- 4** These graphs show the numbers of unemployed males and females taken from Census data for a city in 1931 and 2001.



- Approximately how many women were in employment in 1931?
 - Approximately how many men were in employment in 1931?
 - Approximately what percentage of those employed in 1931 were women?
 - Approximately what percentage of those employed in 2001 were women?
 - Write a short paragraph commenting on the similarities and differences between the data for the two years shown.
- 5** This scatter graph compares the height and foot length of some pupils.



- What type of correlation, if any, does the scatter graph show between a pupil's height and foot length?
- Measure your own height and the length of your right foot. Does your data 'fit' with the data shown in the graph?