Science as a human endeavour

🍃 **Visual/Spatial** 🍃 **Logical/Mathematical** 🍃 **Verbal/Linguistic**

The data presented in the following questions is taken from the 'Road Deaths Australia 2008 Statistical Summary' compiled by the Australian Government Department of Infrastructure, Transport, Regional Development and Local Government.

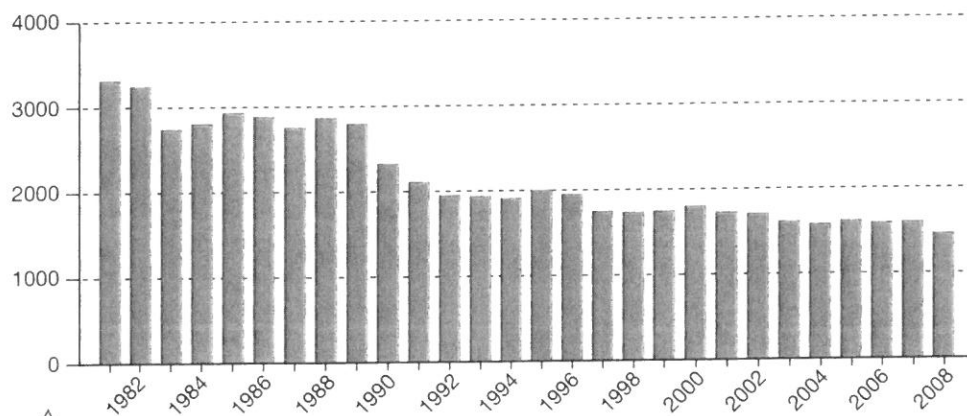1 Figure 8.4.1 shows the total number of people who died on Australian roads each year from 1981 to 2008.

Figure 8.4.1 Australian annual road deaths

(a) **Describe** the trend in the numbers of people killed on Australian roads over this period.

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(b) **Propose** reasons to explain the trend.

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2 Figure 8.4.2 illustrates the breakdown of deaths per road-user group according to gender.
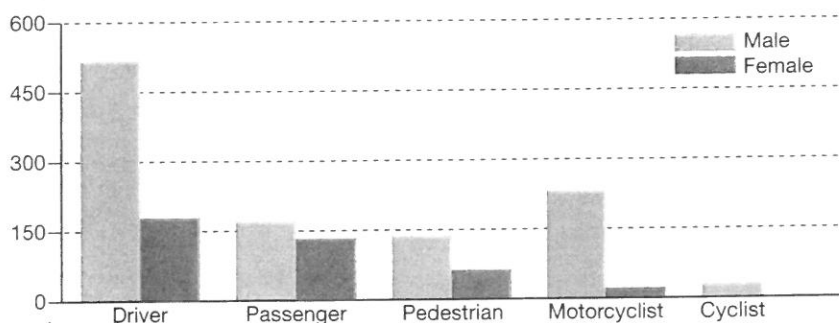

Figure 8.4.2 Deaths by road-user group and gender

(a) **State** the type of road user (driver, passenger, pedestrian, motorcyclist or cyclist) that was most often killed in an accident.

(b) **Propose** a reason to explain this finding.

(c) In 2008, 516 of drivers killed in car accidents were male and 178 were female. In 2007, 615 of those killed were male and 168 were female. **Propose** reasons to explain this difference between men and women.

(d) **Explain** why many more motorcyclist deaths may have occurred amongst males.

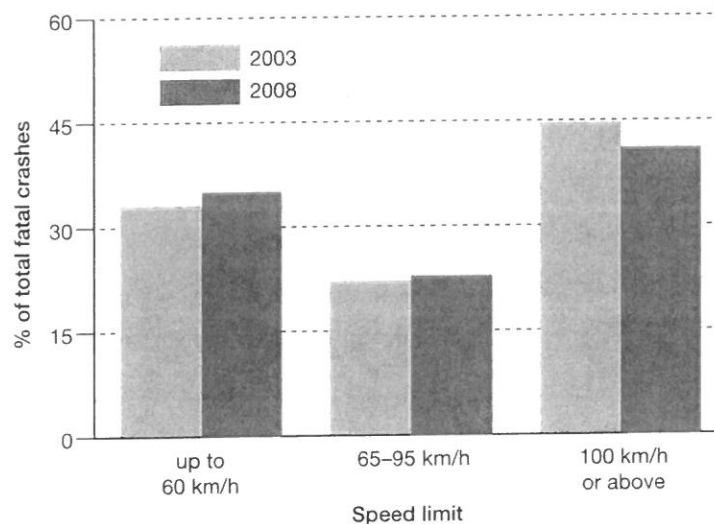**3** Figure 8.4.3 provides data about the speed limit at crash sites.

Figure 8.4.3 Speed limit at crash site

(a) **State** the speed limit zone in which the highest number of road deaths occurred.

(b) **Explain** why you think this result occurred.

4 Study the three graphs shown in Figure 8.4.4. They show the time of accidents that occurred, whether anyone killed was a pedestrian or driver, and their age.
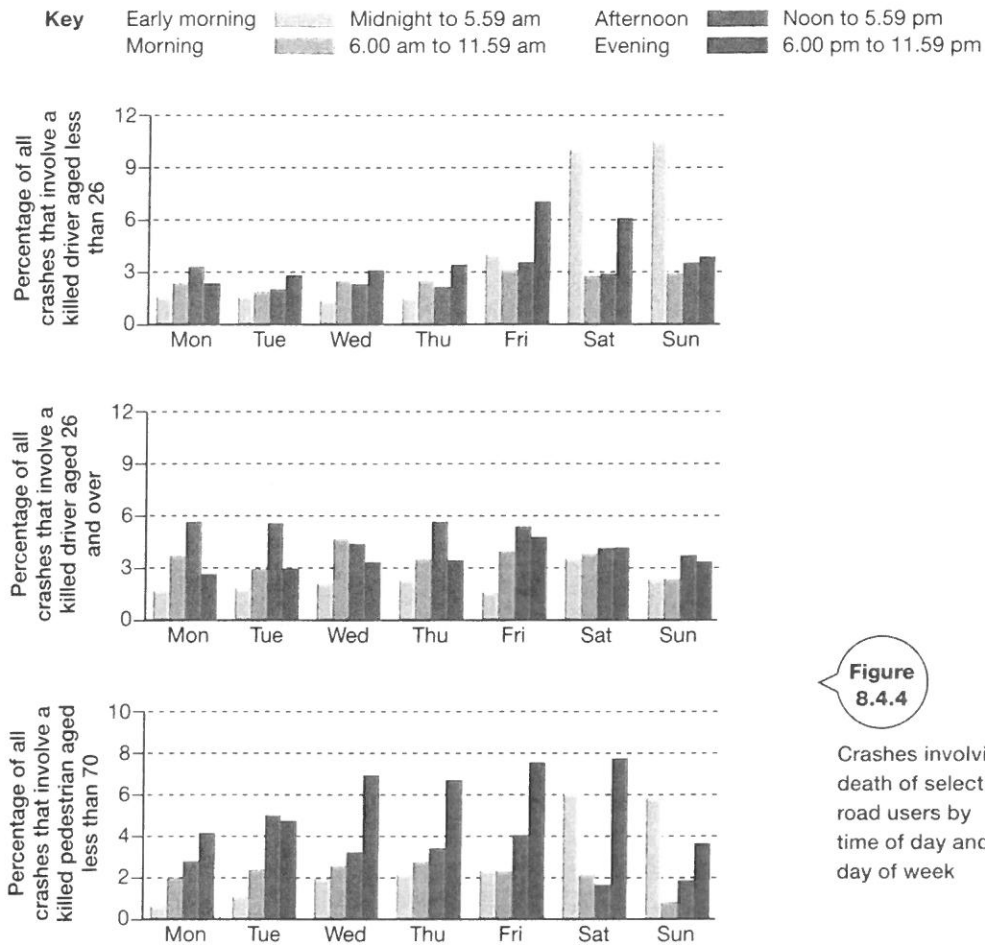
Key	Early morning	Midnight to 5.59 am	Afternoon	Noon to 5.59 pm
	Morning	6.00 am to 11.59 am	Evening	6.00 pm to 11.59 pm

Figure 8.4.4

Crashes involving death of selected road users by time of day and day of week

(a) **State** the time of day and days of the week when drivers under the age of 26 were at a much greater risk of having an accident.

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(b) **State** the time of day that generally involved the most accidents for drivers over the age of 26.

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(c) **Propose** reasons why your responses to the last two questions were different.

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(d) **State** the time of day that pedestrians were at greatest risk of being hit by a car.

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(e) **Justify** why the greatest number of accidents involving pedestrians happened in this time interval.

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