MARKS

4

(2, 2)

1. Bicycle riding has become more popular; is it also getting safer? In the U.S. during 1988, 24,800,000 people rode a bicycle at least six times and 949 people were killed in bicycle accidents. In 1992, there were 54,632,000 riders and 903 bicycle fatalities.

    (a) Calculate and compare the death rates in the two years; comment briefly.

    (b) Although the data come from the *same* government publication, we suspect that some change in the measuring system took place between 1988 and 1992 that makes the data for the two years not directly comparable. Explain briefly why we should be suspicious.

    (a)

    ┌──────────────────────┐ (a)
    └──────────────────────┘
      1988 death rate

    ┌──────────────────────┐ (a)
    └──────────────────────┘
      1992 death rate

    (b)

MARKS

5

(3, 2)

2. You want to compare the 'size' of several statistics textbooks.

    (a) Give three (3) possible numerical variates that make precise the vague idea of the 'size' of a book; for each variate, give the *units* of measurement and the *measuring instrument* required.

    (b) Explain briefly which variate is most appropriate for estimating how long it would take you to read the book; for deciding whether it would fit into your bag.

    (a) (1) |_____| |_____| |_____|
                      Variate   Units   Measuring instrument

    (a) (2) |_____| |_____| |_____|
                      Variate   Units   Measuring instrument

    (a) (3) |_____| |_____| |_____|
                      Variate   Units   Measuring instrument

    (b) Read:

    (b) Fit in bag: