MARKS

3

1. Suppose you are writing an article for a consumer magazine based on a survey of the magazine's readers on the reliability of their household appliances. Of 13,376 readers who reported owning Brand C dishwashers, 2,942 required a service call during the past year, whereas 192 service calls were reported over the same period by 480 readers who owned Brand D dishwashers. Describe an appropriate variate to measure the reliability of a brand of dishwasher, and use its values to assess Brands C and D on the basis of the survey information.

> [   ]
>
> More reliable brand

MARKS

4

(2, 2)

2. 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)