

Choice of Statistics



This activity will help you to:

- Understand the advantages and disadvantages of different statistics*
- Identify poor choice of statistics*
- Choose and justify appropriate statistics*

Fakedata and Fraud (2004) carried out an investigation to decide what colour to paint the walls of their Psychology department. They assigned each possible colour to a number (white=1, green=2, brown=3, red=4 etc.) and then carried out a survey to see which colour the staff and students would prefer. Once they had asked everyone their preference, they decided on the final colour by calculating the mean of all the colour values to find an average colour that everyone would like. The mean came out at 3.1, so the researchers painted the department brown. Everyone hated it.

1. Explain where Fakedata and Fraud went wrong, referring to their choice of measure of central tendency in your answer.
2. Take a look at each of the following data sets. For each one, state which measure of central tendency you would choose to summarise it, and explain why your choice is appropriate.

(a)

1, 3, 4, 4, 7, 9, 10, 10, 12

(b)

yes, yes, no, yes, no, no, yes, no, yes, yes, yes, no, no, no, no, no

(c)

13, 17, 19, 20, 24, 25, 26, 31, 36, 37, 56

(d)

0, 0, 0, 0, 0, 0, 0, 12, 14, 17, 20

(e)

3, 21, 25, 26, 30, 32, 32, 35, 36, 45, 47, 50