

Biased Households?

TASK 1

Household sizes for pupils answering *CensusAtSchool* 2000 – 2001 are shown in Table 1.

Size of Household	Percentage of Households
2	4.2
3	14.4
4	45.2
5	22.8
6	9.5
7	2.0
Above 7	1.9

Table 1

Table 2 is a sample of the raw data taken from a school including household size. Look carefully at this data and explain why the data about household size could be misleading.

Gender	Date of Birth	Postcode	Household Size	Under 18 Females	Under 18 Males
F	12/2/89	FN4 7UG	4	1	1
F	23/5/91	FN4 5EF	3	0	1
M	14/11/90	FN4 9UH	5	1	2
F	13/11/90	FN4 9ED	7	2	2
F	3/7/90	FN3 5ER	4	2	0
M	15/3/91	FN4 7UG	4	1	1
M	27/9/92	FN4 9UH	5	1	2
M	3/12/89	FN4 9ED	7	2	2
F	12/12/91	FN4 7ES	4	1	1
M	29/6/90	FN4 7UG	4	0	2
F	2/1/88	FN4 9UK	3	1	1

Table 2

Do you have any ideas about how to sort this problem out so the data is more accurate? This is not very easy at all especially as this *CensusAtSchool* data came from a variety of schools, year groups and classes.

Whenever you are given data in tables or graphs look for details of how and where it was gathered and study it carefully to determine whether it has inbuilt problems like the data above.

Can you think of another reason why this data is bias?

TASK 2

Table 3 shows the raw data for a random sample taken from *CensusAtSchool* 2000 – 2001 with post code beginning with BS.

1. Clean the data using the method you used for Task 1. Make a note of the method you use and of any data you get rid of.
2. Using your cleaned data from Table 3 find the:
 - i) mean number of people per household
 - ii) median number of people per household
 - iii) modal number of people per household.
3. Which average, the mean, median or mode, would be the best to use for this data?

Report your findings. Explain why the average you chose is the one to use.

Gender	Post Code	Type of Accommodation	Household Size	Under 18 Females	Under 18 Males
M	BS20 6TF	Semi-detached	4	1	1
M	BS11 2HD	Semi-detached	3	1	0
M	BS11 1SR	Semi-detached	4	2	0
M	BS10 9UB	Semi-detached	7	3	2
F	BS20 6TF	Semi-detached	4	0	2
M	BS10 9BU	Semi-detached	4	2	0
M	BS11 2HD	Flat	2	1	0
M	BS11 1SR	Terraced	4	2	0
F	BS11 1SR	Semi-detached	4	2	0
F	BS11 2HD	Flat	2	1	1
M	BS11 1SR	Semi-detached	5	3	0
F	BS11 9NL	Terraced	8	3	2
F	BS10 6RT	Flat	2	0	1
M	BS10 6RT	Semi-detached	4	1	0
M	BS10 6RT	Semi-detached	4	1	0
M	BS10 9BU	Semi-detached	4	2	0
F	BS11 9NL	Semi-detached	7	3	2
M	BS11 9NL	Terraced	6	2	2
M	BS11 9NL	Terraced	6	1	3
M	BS11 2HD	Semi-detached	3	1	0
F	BS11 9NL	Terraced	10	1	2
M	BS10 9UB	Semi-detached	7	3	2
F	BS20 6TF	Terraced	4	0	1
M	BS11 2HD	Semi-detached	3	1	0

Table 3