

## Biased Households? Teachers' Notes

This activity is designed to help learners understand the importance of:

- questioning how the data has been collected;
- inspecting and cleaning the raw data;
- calculating and using the correct average.

### TASK 1

The rows highlighted are probably brother and sister (yellow and orange) or brothers (green) so one row from each should be discarded.

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

Table 2

### TASK 2

1. This data may be harder to clean than the data in +Table 2 as the date of birth has been replaced by type of accommodation. Each learner will clean the data differently so they will have different answers for part 2.

#### One possible answer

Referring to Table 3. Do not discard either yellow row - as only one under 18 male in each.

Discard one orange row. Discard one green row. Do not discard a blue row.

2. i) Mean =  $100/22 = 4.5$  people per household.  
 ii) Median = 4 people per household.  
 iii) Modal value (mode) = 4.
3. In this case the median is the best average to use as it is the middle value and not distorted by extreme values.

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

Table 3