GCSE HIGHER · REVISION MAT 4

Sampling

1 Explain what is meant by a biased sample.

2 Give one advantage of a large sample.

3 A survey about school lunches only asks Year 7.

Explain why this may be biased.

4 A factory has 45 day-shift and 75 night-shift workers.

A stratified sample of 24 is taken.

How many day-shift workers?

5 Explain how to choose a random sample of 30 students using a computer.

6 25 rabbits are tagged.

Later 40 rabbits are caught; 5 are tagged.

Estimate the rabbit population.

7 Explain why the time between capture and recapture should not be too long.

8 Ages: under 18: 135, 18–60: 270, over 60: 95.

A stratified sample of 100 is taken.

How many from each group?

Mr&Mrs MATHS

ANSWERS · REVISION MAT 4

Sampling

1 A sample that does not fairly represent the population.

2 It gives more reliable results.

3 Other year groups may have different views.

4 $\frac{45}{120} \times 24$

9

5 Give each student a number and use a random number generator to choose 30 different numbers.

6 $\frac{25}{N} = \frac{5}{40}$

200

7 The population could change through births, deaths or migration.

8 Total 500

27, 54 and 19

Mr&Mrs MATHS