GCSE FOUNDATION · REVISION MAT 4

Sampling

1 A gym has 1200 members. The manager asks 60 members about opening hours.

(a) What is the population?

(b) What is the sample?

2 A gym has 1200 members.
They asks members at 7 am.

Explain why this sample may be biased.

3 A gym has 1200 members. The manager asks 60 members about opening hours.

Explain why a larger sample would give more reliable results.

4 A gym has 1200 members. The manager asks 60 members about opening hours.

21 out of the 60 in the sample want longer opening hours.

Show that this suggests about 420 of the members want longer opening hours.

5 A survey includes this question:

"How often do you visit the gym? Often / Sometimes"

Give one criticism of the question.

6 Two samples of 60 are taken from the 1200 members.
In the first, 21 want longer opening hours. In the second, 27 want longer opening hours.

Use both samples to estimate how many of the 1200 members want longer opening hours.

Mr&Mrs MATHS

ANSWERS · REVISION MAT 4

Sampling

1 (a) **1200 members**

(b) **60 members asked**

2 Only people who use the gym early are asked.

3 A larger sample is more likely to represent the whole population.

Results from small samples vary more by chance.

4 21 ÷ 60 × 1 200 = **420** ✓

5 The options are vague and do not cover all answers.

6 Combined: 48 out of 120

48 ÷ 120 × 1 200 = **480**