

Stratified Sampling

How to ...

In Holborn School there are

460 students in Key Stage 3

320 students in Key Stage 4

165 students in Key Stage 5

Nimer is carrying out a survey. He needs a sample of 100 students stratified by Key Stage.

Work out the number of students from Key Stage 3 there should be in the sample.

$$\begin{array}{r} \text{Total students} = 460 \\ + 320 \\ + 165 \\ \hline 945 \end{array}$$

$$\text{Key Stage 3... as a fraction} = \frac{460}{945}$$

$$\begin{array}{l} \text{the number in a sample of 100} \\ = \frac{460}{945} \times 100 = 48.67 \dots \end{array}$$

YOU CAN'T HAVE .67... OF A STUDENT (2)

so 48 or 49 (are both acceptable answers)

Now have a go yourself ...

SORTED IT

The table below shows the number in each year group at a school. A sample of 60 students is to be taken. How many students from each year group should be in the sample?

Year	7	8	9	10	11
No. of students	150	150	100	100	100

NAILED IT

A headteacher wants to find out what year 7 think about their first term at their new school. He decides to ask a stratified sample of 50 students. There are 276 boys and 324 girls in year 7. Work out the number of boys and girls he should include in the sample.

MASTERED IT

A factory owner wants to find out what his employees think about the canteen. He decides to ask a stratified sample of 90 of his workers. The table below shows how many people are in each of the six strata he intends to use. Calculate the number of workers he needs to ask in each strata.

	Office workers	Factory workers	Managers
Females	50	250	10
Males	80	490	20

Exam Questions

	Male	Female
First year	399	602
Second year	252	198

The table gives information about the number of students in the two years of a college course. Anna wants to interview some of these students.

She takes a random sample of 70 students stratified by year and gender.

Work out the number of students in the sample who are male and in the first year.

Ready to be marked ?

Checklist

☐

Answer checked

☐

Working out shown



Keywords



Things to remember ...



What went well ...

Teacher comment ..