# Stratified sampling

1. The table shows the number of boys and the number of girls in each year group at Springfield Secondary School. There are 500 boys and 500 girls in the school.

| Year group | Number of boys | Number of girls |
|---|---|---|
| 7 | 100 | 100 |
| 8 | 150 | 50 |
| 9 | 100 | 100 |
| 10 | 50 | 150 |
| 11 | 100 | 100 |
| Total | 500 | 500 |

Azez took a stratified sample of 50 girls, by year group.
Work out the number of Year 8 girls in his sample.

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2. A head teacher wishes to select a stratified sample of 50 pupils from year 10,11 ,12 and 13 .Find a  stratified sample of each year students.

| Year | Number of pupils | |
|---|---|---|
| 10 | 320 | |
| 11 | 300 | |
| 12 | 180 | |
| 13 | 150 | |

3. The table shows  the number of students in each year group of school. How many students  should be selected from each year  group to create a stratified sample of 80 students?

| Year | Number of Pupils | |
|---|---|---|
| 7 | 150 | |
| 8 | 148 | |
| 9 | 162 | |
| 10 | 154 | |
| 11 | 152 | |
| 12 | 80 | |
| 13 | 62 | |

4.   A school has 450 students. Each student studies one of Greek or Spanish or German or French. The table shows the number of students who study each of these languages.

| Language | Number of students | |
|---|---|---|
| Greek | 45 | |
| Spanish | 121 | |
| German | 98 | |
| French | 186 | |

An inspector wants to look at the work of a stratified sample of 70 of these students. Find the  number of students studying each of these  languages  that should be in the sample.