** Statistical Inquiry (H)**

Pre-Intervention Assessment

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Class: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| --- | --- | --- |
| **Question** | **Objective** | **RAG** |
|  1 | Understand and apply types of sampling |  |
|  2 | Calculate averages from a table |   |
|  3 | Use the Petersen capture-recapture method to estimate population sizes |   |

**1**. The table shows information about 1065 students.



Elena takes a stratified sample of 120 students by year group and by gender.

Work out the number of Year 8 female students in her sample.

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**2.** Fred did a survey on the areas of pictures in a newspaper.
The table gives information about the areas.

|  |  |
| --- | --- |
| **Area (A cm2)** | **Frequency** |
| 0 < *A* ≤ 10 | 38 |
| 10 < *A* ≤ 25 | 36 |
| 25 < *A* ≤ 40 | 30 |
| 40 < *A* ≤ 60 | 46 |

Work out an estimate for the mean area of a picture.

........................................................... cm²

**3**. A fisherman wants to estimate the number of fish in his pond.

One day he catches 128 fish. He puts a tag on each fish then releases them.

Then next day the fisherman catches 143 fish.

33 of these fish have a tag on them.

Work out an estimate for the total number of fish in his pond.

Write down any assumptions you have made.

[Glue here]