Name:

a) A school of 1000 pupils has 200 pupils in year 9.
   A stratified sample of 50 pupils is taken.
   How many year 9 pupils should be picked?

b) A room of 400 people has 100 adults and 300 children
   in it. A stratified sample of 40 people is taken.
   How many adults should be picked?

c) An office of 880 people has 80 vegetarians.
   A stratified sample of 110 people is taken.
   How many vegetarians should be picked?

d) A school of 720 pupils has 180 pupils in year 10.
   A stratified sample of 80 pupils is taken.
   How many pupils picked should **not** be year 10 pupils?

e) A room of 192 people has 42 adults and 150 children in it.
   A stratified sample of 30 people is taken.
   How many adults and children should be picked?

**Capture – Recapture Method Questions**

f) 80 fish were caught in a lake, marked and then released.
   The next day, 10 were caught, of which 5 had markings.
   Estimate the number of fish in the lake.

g) 80 fish were caught in a lake, marked and then released.
   The next day, 20 were caught, of which 4 had markings.
   Estimate the number of fish in the lake.

h) 76 fish were caught in a lake, marked and then released.
   The next day, 30 were caught, of which 12 had markings.
   Estimate the number of fish in the lake.

i) 32 fish were caught in a lake, marked and then released.
   The next day, 15 were caught, of which 3 had markings.
   Estimate the number of fish in the lake.

**Exam question:**

A scientist wants to estimate the number of fish in a lake.
He catches a sample of 20 fish from the lake.
He marks each fish with a dye and then puts them back in the lake.
The next week the scientist catches 24 fish from the lake.
He finds that 3 of them are marked with the dye.
Estimate the total number of fish in the lake.