

WJEC Intermediate/Higher Tier Sampling Questions

- (a) A School Council wants to know pupils' views on their school uniform. Which of the following statements shows how a truly random sample of the general population can be obtained? [1]
Circle your answer.

A: Randomly selecting pupils in the canteen at lunchtime.

B: Randomly selecting pupils from those that attend the next School Council meeting.

C: Randomly selecting pupils with a surname beginning with the letter J.

D: Giving each pupil a raffle ticket and then randomly drawing raffle tickets for selection.

E: Selecting every 2nd pupil from each form register.

- (b) *VotePredict* is a specialist company working in the field of polling and predicting voting patterns in elections worldwide. They are asked to organise a debate with an audience that is representative of five political parties. The five political parties and their predicted number of votes, given in alphabetical order, are as follows.

Political Party	Predicted votes
Central	23 456
Economy	43 244
First Reformists	83 124
Status Quest	11 782
West Term	63 789

The invited audience should be a stratified sample using this information.

It is intended to have 250 people in the audience at the debate. How many people who intend to vote for the Central Party should be in the audience? [3]

.....

.....

.....

.....

.....

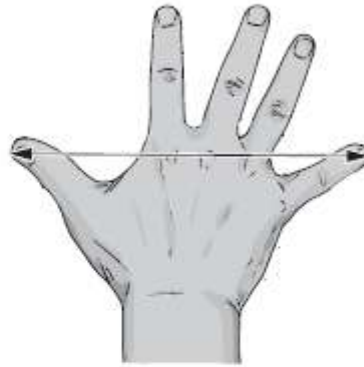
Circle TRUE or FALSE for each of the following statements.

[2]

Selecting the first name on each class register will give a random sample.	TRUE	FALSE
The ratio of boys to girls in a school is 2 : 3. The pupil committee of 30 pupils is selected using a gender stratified sample. There are 10 boys and 20 girls on the school committee.	TRUE	FALSE
A telephone survey is carried out to find which political party people support. The sample of people surveyed is not a random sample of the whole population.	TRUE	FALSE
A stratified sample always considers proportions according to given criteria.	TRUE	FALSE
A random sample of people means everyone has an equal chance of being selected.	TRUE	FALSE

Simon plans to make gloves.

- (a) One morning, Simon decided to carry out a survey to find the mean hand span of people in Wales.



He decided to sample systematically.

He decided to sample from the first 240 people who pass him in the street during the morning.

He wanted to take 20 people's hand span measurements.

Explain how Simon could use systematic sampling to obtain 20 measurements.

[1]

.....

.....

.....

.....

.....

.....

9. The table shows the number of Year 11 pupils attending schools in Cwmifan.

School	Cwrt Haf	Cwmifan High	Henclwyd
Number of Year 11 pupils	307	239	144

In total there are 690 Year 11 pupils attending these three schools.

A new youth theatre has been set up in Cwmifan.

On the opening night, a total of 80 Year 11 pupils from these three schools are going to be invited to attend.

Use a stratified sampling method to calculate the number of Year 11 pupils from each school who should be invited.

You must show all your working.

[3]

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

School	Cwrt Haf	Cwmifan High	Henclwyd
Number that should be invited			