

SAMPLING FRAMES

SAMPLING FRAMES. GOOD/POOR SAMPLING FRAMES.

Examination Practice Questions

You should have:

A ruler, protractor, compasses, a pen, pencil, eraser, calculator.
For some questions, you may need tracing paper.

Instructions

- Use **black** ink or ball-point pen.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- **Calculators may be used.**

Information

- The marks for each question are shown in brackets.
- Use the number of marks for each question as a guide as to how much time to spend on each question. As a rough guide, you can multiply the number of marks by 1.2 to see how many minutes you should spend on a question.
- Questions been carefully compiled from or modelled on a variety of past papers and will generally get more challenging as the document progresses. Some of the later questions will go beyond the core grade level for this topic.

Advice

- Read each question carefully before you start to answer it.
- Don't forget to have fun.
- Check your answers at the end.

Q1.

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A librarian wants to investigate, for books in her library, if there is a relationship between how old a book is and for how long it is borrowed.

For the librarian's investigation write down a suitable sampling frame.

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(1)

Q2.

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A researcher is investigating how safe residents of different ages feel in their community at different times of the day.

The researcher is going to use a questionnaire with a sample of residents in a small town.

She uses the local telephone directory as her sampling frame.

*Explain whether or not this is a good choice of sampling frame.

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(2)

A town council is proposing to build a new leisure centre.

Michelle is going to carry out a survey to find out what all the people in the town think of the proposal.

Michelle plans to use the electoral register as the sampling frame.

(i) Explain what you understand by the term sampling frame.

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(1)

(ii) Give one problem Michelle may have using the electoral register as the sampling frame.

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(1)

The Daily Dispatch and The Morning Chronicle are two newspapers in a town.

Each newspaper conducted a survey in the town to see who the voters will vote for in a local election.

The population for each survey is all the voters in the town.

Complete the sentence below with the correct statistical term.

A **list** of all voters in the town is known as a

(1)

Q5.

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A research company wants to find out how likely people in Great Britain are to vote in the next General Election.

The population is defined as all the voters in Great Britain.

Suggest a suitable sampling frame.

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(1)

Q6.

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Some people think that drinking cocoa before bedtime may help to reduce blood pressure.

A university student is going to research this.

The student decides to collect information from students at his university.

The student decides to use a **sample**, not a census.

Describe a sampling frame that the student could use.

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(1)

Q7.

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Collis Town Council wants to produce a magazine for adults living in Collis.

The council wants to find out the topics the adults are interested in.

They decide to ask a sample of the adults.

Describe a suitable sampling frame that could be used.

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(1)