Evidence in statistical investigations

Learn and practise | Free preview

A sample from this topic. The complete topic collection contains three different resources and worked solutions.

Read the explanation and worked example. Show your working; use a calculator only where asked.

What you will practise

• Conduct and evaluate an investigation using different data types.

• Explain a method and check the reasonableness of a result.

Useful starting skills: Use the prerequisite operations and representations shown in the worked example.

Plan a question, population, sampling method and variables. Collect consistently, check data quality, and choose displays that match numerical or categorical variables.

A conclusion should answer the original question and explain the strength and limits of evidence. Association in observational data does not establish causation.

Worked example

Investigate whether travel mode relates to travel time.

Collect anonymous categorical mode and numerical minutes from a representative sample.

Compare time distributions by mode and discuss location or distance as possible explanations.

Answer: Report an association, with limitations; do not infer causation.

Try it yourself

Name: _____ Date: _____

1. Identify variables for whether homework location relates to completion time.

2. Why define what counts as completed homework?

Answers and explanations

Check the method as well as the final answer. An alternative correct method is also valid.

1. Location categorical; minutes numerical

Record both for each participant.

2. To make measurements consistent

Different definitions reduce comparability.

Curriculum reference: VC2M9ST05

Independent original resource. Not published or endorsed by VCAA. This focused set supports the listed skills; it is not a complete course or an official assessment.

This free preview may be shared intact with attribution. Not for sale.