Evaluating statistical claims

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

• Check whether data, displays and sampling support a public claim.

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

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

Evaluate the source, target population, sample selection, sample size, measurement method and missing responses. Ask whether the evidence addresses the actual claim.

Inspect axes, denominators, time windows and uncertainty. Ethical reporting preserves context and avoids implying causation or certainty beyond the study design.

Worked example

A headline says 80% support a proposal after 40 of 50 voluntary website voters support it.

80% correctly describes those respondents.

A voluntary website poll may not represent the wider population.

Answer: Report the respondent result without asserting population-wide support.

Try it yourself

Name: _____ Date: _____

1. A chart shows revenue rising from 100 to 110 but starts axis at 99. What should a reader check?

2. A claim says cases doubled from 2 to 4. What context matters?

Answers and explanations

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

1. The truncated scale and actual 10% increase

The picture can exaggerate the change.

2. Population size, period and uncertainty

Relative change alone hides the small absolute count.

Curriculum reference: VC2M10ST04

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