

This assessment is based on a now-expired version of the achievement standard and may not accurately reflect the content and practice of external assessments developed for 2024 onwards.

91946Q



Mana Tohu Mātauranga o Aotearoa
New Zealand Qualifications Authority

Level 1 Mathematics and Statistics RAS 2023

91946Q Interpret and apply mathematical and statistical
information in context

Credits: Five

PILOT ASSESSMENT

ASSESSMENT TASK

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You are to compose a report on electricity usage in New Zealand. Your report will be divided into two parts. Section A is based on “Home” electricity usage, and Section B is based on electricity generation and the environment.

You will use the following questions below to form the basis of your report. You must refer to specific information contained in the Resource Booklet throughout your report.

Much of the information you will need can be found in the Resource Booklet provided.

SECTION A: “HOME” ELECTRICITY USAGE

- Compare and comment on the prices per kW hour of electricity for “Homes” and electricity for “Businesses” between the years of 1990 and 2022.
Use the information provided in Resource 1.
- There are many news articles claiming that the price of power has been increasing for New Zealand “Homes” customers.
Comment on whether these claims can be supported.
Justify your answer using the information from Resource 1 and Resources 2A and 2B in the Resource Booklet. Provide numerical evidence to support your answer where appropriate.
- Resources 2A and 2B provide information regarding the average “Homes” electricity expenditure and electricity usage per household in New Zealand.
What conclusions can be made from this information?
Justify and support your conclusions by providing calculations and referring to the information from Resource 1 and Resources 2A and 2B in the Resource Booklet.
Provide at least TWO different comments.
- Using the information provided in Resource 3 in the Resource Booklet and your knowledge of a typical medium-sized New Zealand household, how should a household choose their electricity company?
Discuss any assumptions and the limitations of your answer, giving at least TWO different supporting comments.

SECTION B: ELECTRICITY GENERATION AND THE ENVIRONMENT

- Which electricity generation method creates the most environmental impact?
Justify your decision with reference to the information provided in Resource 4 – 6.
- It is claimed that New Zealand is on track to reach 100% renewable energy target by 2030.
Comment on this claim, using the information provided in Resource 4 – 6.
- With the information provided in the Resource Booklet and your own knowledge of emissions, what could the government do in order to reach “Zero Carbon Emissions by 2050” in New Zealand?
Provide a detailed and justified response and discussion of one possible solution that the government could consider.