

MATHEMATICS METHODS Level 4

Common Assessment Task

Work Requirements:

N/A

Assessment Type:

Short response

Criteria being assessed:

- Criterion 1 - elements 1, 2 and 5
- Criterion 8 - element 6

Suggested conditions:

- This task should take learners no more than 2.5 hours.
- Report should be a maximum of 250 words.
- Learners should submit a handwritten or word-processed response.
- This task requires an individual response by each learner.

Task Description:

You will write an Investigation/Report (no more than 250 words) in response to the following stimulus:

How is our weather changing?

What you need to do:

Use the Bureau of Meteorology (BOM) - Climate data (or a provided data set) to collect rainfall data for a location in Australia. The collection of data must span a period of at least 80-years. Use the data to construct frequency tables and calculate mean and standard deviation for this location.

Write an individual report (no more than 250 words) considering the stimulus and understanding of normal distribution. Answer the following questions in your report:

- What is the predicted rainfall for a 1 in 100-year event based upon this data?
- What about a 1 in 1000-year event?
- Is there anything in the data in the last 25 years that indicates a change to the data before that? Does this indicate the size of floods may increase in your chosen location or decrease?

Teacher use only - What needs to be submitted for assessment?

Learners will write an individual report (no more than 250 words).