

# CONSULTATION ON PROPOSAL TO CHANGE THE ASSESSMENT MODE OF LEVEL 1 MATHEMATICS AND STATISTICS ACHIEVEMENT STANDARD 91027 FROM EXTERNAL TO INTERNAL

NB: The feedback form for printing off, for discussion purposes or completing by hand, starts on page 4 of this document.

## Introduction

The Ministry of Education is proposing that the assessment mode of achievement standard 91027 Mathematics and Statistics 1.2 *Apply algebraic procedures in solving problems* be changed from external to internal.

## Background

When this standard was originally developed, the reason for the external assessment mode was about equity issues related to technology and the desire for all students to have the same assessment task.

This standard is currently assessed through the use of a Common Assessment Task (CAT) and assessment schedule that is designed and developed by NZQA and administered and marked in schools.

The Ministry wishes to consult the secondary sector on this proposal.

## Reasons for the Proposal

The reasons for the proposal that the standard become internally assessed are summarised as follows:

- Schools can choose to assess students when students are ready for the assessment.
- The technology-free nature of the standard can still apply if considered necessary or desirable.
- The implementation of the assessment currently is logistically very difficult, with clashes occurring with other significant events in the secondary school calendar that NZQA has to work around.
- The timeframe for benchmarking is short with pressure to get confirmed schedules to schools within a few days, which has sometimes required minor adjustments to published schedules.
- The current nature of the assessment has given this standard a perceived degree of importance that was not intended and is out of kilter with other Level 1 Mathematics and Statistics standards.
- The proposal would remove the anomaly of having four externally assessed standards in mathematics and statistics. All other subjects have a maximum of three.
- The standard is well understood by teachers and they are making sound assessor judgements with a high level of agreement with the verifiers' judgements.

## Further Considerations

If this standard becomes internally assessed then aspects of the standard itself, and assessment against the standard, need to be considered. This section looks at implications for both the standard and assessment of such a change in assessment mode.

## The Achievement Standard

This standard has an explanatory note that states “Electronic technology is not permitted in the assessment of this achievement standard”. This does not apply to the other internally assessed standards, including the other Level 1 algebra standard AS91029 *Apply linear algebra in solving problems*. At the time the standard was developed there were concerns about equity of access to both graphics and CAS enabled calculators. The question of whether this restriction is still required needs to be considered.

## Style and Format of Assessment

If this achievement standard becomes internally assessed then the style and format of assessment can be expected to change. Internal assessment provides considerable flexibility in the collection of evidence. Care needs to be taken to allow students opportunities to present their best evidence against the standard. Specific constraints that apply to external assessment (e.g. the one hour time limit) do not apply to internal assessment. Evidence for assessment against internal standards can be gathered from an extended activity over a period of time.

The standard assesses if a student can apply algebraic procedures in solving problems. In order to achieve the standard there needs to be evidence of:

- selecting and using procedures in solving problems
- demonstrating knowledge of algebraic concepts and terms
- communicating solutions using appropriate mathematical symbols.

The assessment activity needs to pose a problem and then provide opportunities for the student to select and use procedures in solving the problem.

**NB:** If any changes result from this consultation they will be implemented in 2015.

## INSTRUCTIONS FOR COMPLETING FEEDBACK FORM

This printable Feedback Form has been provided to allow teachers to have printed copies for round-table discussions, or for completing by hand. For completing online please use the 'online' version.

Note: Only those submissions that are emailed to the address below during the consultation period will be accepted.

We recommend that you have a copy of the achievement standard as you progress through the questionnaire.

The feedback form can be either:

- saved and completed electronically, or
- printed for discussion purposes, completed by hand and then scanned.

The electronic file should then be emailed to [secondary.education@minedu.govt.nz](mailto:secondary.education@minedu.govt.nz) by **Friday 20 June 2014**.

If you have any questions about the consultation, please contact Geoff Gibbs at (04) 463 8546 or by email: [secondary.education@minedu.govt.nz](mailto:secondary.education@minedu.govt.nz)

## CONSULTATION QUESTIONNAIRE FEEDBACK FORM

**NB:** All responses will remain confidential to the Ministry of Education and the New Zealand Qualifications Authority. No individual's, school's or organisation's feedback will be identified when the results of this questionnaire are reported.

This response is on behalf of  people (*enter the number of people*).

### Proposal

That the assessment mode of the achievement standard 91027  
Mathematics and Statistics 1.2 *Apply algebraic procedures in solving problems*  
be changed from external to internal.

**Q1** To what extent do you agree or disagree with this proposal? (tick [✓] one of the options shown below)

Strongly Disagree	Disagree	Neutral	Agree	Strongly agree	Don't know
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Q2** Please give your reasons for the response to Question 1 in the space below.

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**Q3** If the proposal to change the assessment mode of the standard from external to internal goes ahead, do you think any other aspect(s) of the standard needs to change as a result of this? (tick [✓] one of the options shown below)

Yes	No	Don't know
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Q4** If you answered “yes” to Question 3, please describe the aspect(s) of the standard that you think needs to change, in the space below.

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**Q5** If the proposal to change the assessment mode of the standard from external to internal goes ahead, do you think that the ban on the use of electronic technology needs to remain? (tick [✓] one of the options shown below)

Yes	No	Don't know
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Q6** Please give your reasons for the response to question 5 in the space below.

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**Q7** If you have any other comments about this proposal please make these in the space below.

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