
ALGEBRA
**Use sequences and series to solve
problems**

level:	2
credit:	2
final date for comment:	November 2003
expiry date:	December 2004
sub-field:	Mathematics
purpose:	People credited with this unit standard are able to use sequences and series to solve problems. This unit standard is based on objectives from Level 7 of <i>Mathematics in the New Zealand Curriculum</i> or <i>Tauaki Marautanga Pangarau</i> .
entry information:	Open, but competence is assumed in a number of level 1 mathematics unit standards, including Unit 5238, <i>Draw and describe graphs involving two variables</i> and Unit 5239, <i>Describe patterns and solve problems and equations</i> .
accreditation option:	Evaluation of documentation by NZQA.
moderation option:	A centrally established and directed national moderation system has been set up by NZQA on behalf of the Science and Technology National Standards Body - Mathematics Advisory Group (General Education).

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special notes:

- 1 Learning Programme
This unit standard can be used to assess outcomes of a learning programme based on achievement objectives from *Mathematics in the New Zealand Curriculum* (Learning Media, Ministry of Education, 1992):
Algebra (Exploring patterns and relationships), Level 7, page 158
 - use sequences and series to model real problems and interpret their solutions;
 - describe and use arithmetic or geometric sequences or series in common situations;or on *Tauaki Marautanga Pangarau* (Learning Media, Ministry of Education, 1994), Taurangi, Taumata 7.

Some common contexts are: compound interest, simple interest, half-life problems, depreciation, inflation.

The skills of this unit standard are some of those that could satisfy requirements for Unit 5243, *Apply mathematical processes and skills in problems*.

- 2 Assessment Note
The standard **must** be met by using both arithmetic and geometric sequences and series.

Problems could include: finding general terms, finite and infinite sums.

Calculators, graphing calculators and computers could be used in achievement of credit for this unit standard.

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Elements and Performance Criteria

element 1

Use sequences and series to solve problems.

performance criteria

- 1.1 Method selected is appropriate to the problem.
- 1.2 Solution is consistent with the problem.

Comments to:

Science and Technology National Standards Body
- Mathematics Advisory Group (General Education)
Unit Standard Revision
PO Box 160
WELLINGTON

by November 2003.

Please Note: Providers must be accredited by the Qualifications Authority before they can offer programmes of education and training assessed against unit standards.

Accredited providers assessing against unit standards must engage with the moderation system that applies to those unit standards. [Please refer to relevant Plan ref: 0071]