

Achievement Standard

Subject Reference Mathematics 1.7

Title Solve straightforward number problems in context

Level 1 **Credits** 3 **Assessment** External

Subfield Mathematics

Domain Number

Registration date 21 October 2003 **Date version published** 21 October 2003

This achievement standard focuses on the solution, in context, of straightforward number problems involving fractions, decimals, percentages and ratios.

	Achievement Criteria	Explanatory Notes
Achievement	<ul style="list-style-type: none"> Solve straightforward number problems in context. 	<ul style="list-style-type: none"> A selection will be taken from problems involving: <ul style="list-style-type: none"> making sensible estimates and checking the reasonableness of results integers fractions decimals and/or percentages percentage increase or decrease (mark-up, discount, GST or equivalent) expressing one quantity as a percentage of another sharing quantities in a given ratio.
Achievement with Merit	<ul style="list-style-type: none"> Solve number problems in context involving manipulation, several steps or reversing processes. 	<ul style="list-style-type: none"> A selection will be taken from problems involving: <ul style="list-style-type: none"> finding the original quantity given a percentage change finding the GST – exclusive price from the GST – inclusive price manipulation of numbers expressed in standard form solving multi-step problems from the range given in Achievement.

	Achievement Criteria	Explanatory Notes
Achievement with Excellence	<ul style="list-style-type: none"> Devise a strategy and solve a number problem. 	<ul style="list-style-type: none"> The problem may involve situations like budgeting, fund-raising or hire purchase that require multiple and sequential number calculations to support decisions, or that require an extended sequence of number calculations to support decisions. Clear and logical communication of the strategy and the problem-solving process is required.

General Explanatory Notes

- This achievement standard is derived from *Mathematics in the New Zealand Curriculum*, Learning Media, Ministry of Education, 1992:
 - achievement objectives, pp. 48, 52
 - suggested learning experiences, pp. 49, 53
 - sample assessment activities, pp. 50, 54
 - mathematical processes, p. 28.
- Students will use essentially correct mathematical statements and sensible rounding, but will not be penalised for minor errors.

Quality Assurance

- Providers and Industry Training Organisations must be accredited by the Qualifications Authority before they can register credits from assessment against achievement standards.
- Accredited providers and Industry Training Organisations assessing against achievement standards must engage with the moderation system that applies to those achievement standards.