

Achievement Standard

Subject Reference Mathematics 1.9

Title Use geometric reasoning to solve problems

Level 1 **Credits** 2 **Assessment** External

Subfield Mathematics

Domain Geometry

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

This achievement standard focuses on the use of geometric reasoning, based on the properties of polygons and lines, to solve problems.

	Achievement Criteria	Explanatory Notes
Achievement	<ul style="list-style-type: none"> Use geometric reasoning to solve problems. 	<ul style="list-style-type: none"> The solution of problems will involve a two-step process. Problems will be based on: <ul style="list-style-type: none"> similar polygons properties of polygons, and parallel and intersecting lines.
Achievement with Merit	<ul style="list-style-type: none"> Use, and state, geometric reasons in solving problems. 	<ul style="list-style-type: none"> The solution of problems will involve at least a two-step process. Problems will be based on: <ul style="list-style-type: none"> similar polygons properties of polygons, and parallel and intersecting lines circle geometry (limited to angle geometry). Reasoning is required.

	Achievement Criteria	Explanatory Notes
Achievement with Excellence	<ul style="list-style-type: none"> Solve an extended geometrical problem. 	<ul style="list-style-type: none"> The problem could involve: <ul style="list-style-type: none"> investigating a conjecture presentation of a proof solution of a problem involving at least 3-step reasoning. Linking statements and an explanation of reasoning are 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. 110, 116
 - suggested learning experiences, pp. 111, 117
 - sample assessment activities, pp. 112, 118
 - mathematical processes, pp. 24, 26.

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.

Accreditation and Moderation Action Plan (AMAP) reference

0226