

Achievement Standard

Subject Reference	Mathematics and Statistics 1.12		
Title	Demonstrate understanding of chance and data		
Level	1	Credits	4
		Assessment	External
Subfield	Statistics and Probability		
Domain	Statistics		
Status	Registered	Status date	30 November 2010
Planned review date	31 December 2014	Date version published	17 November 2011

This achievement standard involves demonstrating understanding of chance and data.

Achievement Criteria

Achievement	Achievement with Merit	Achievement with Excellence
<ul style="list-style-type: none"> Demonstrate understanding of chance and data. 	<ul style="list-style-type: none"> Demonstrate understanding of chance and data, justifying statements and findings. 	<ul style="list-style-type: none"> Demonstrate understanding of chance and data, showing statistical insight.

Explanatory Notes

Version 2 of this achievement standard was republished to correct an error in the status date.

- This achievement standard is derived from Level 6 of *The New Zealand Curriculum*, Learning Media, Ministry of Education, 2007, and is related to the material in the *Teaching and Learning Guide for Mathematics and Statistics*, Ministry of Education, 2010 at <http://seniorsecondary.tki.org.nz>. The achievement standard is aligned to the following achievement objectives taken from the Statistical Literacy and Probability threads of the Mathematics and Statistics learning area:
 - evaluate statistical investigations or probability activities undertaken by others, including data collection methods, choice of measures, and validity of findings
 - calculate probabilities, using fractions, percentages, and ratios
 - evaluate statistical reports in the media by relating the displays, statistics, processes, and probabilities used to the claims made
 - investigate situations that involve elements of chance: calculating probabilities in discrete situations.
- Demonstrate understanding of chance and data* involves using appropriate concepts and terms to demonstrate statistical and probability literacy.

Justifying statements and findings involves providing supporting evidence such as summary statistics, probabilities, data values, trends or features of visual displays, and could involve reference to the context and the population.

Showing statistical insight involves integrating statistical and contextual information and knowledge to show a deeper understanding. This may involve critical reflection on the validity of the processes and conclusions given in contexts involving probability or statistics.

- 3 Students need to be familiar with:
 - the statistical enquiry cycle
 - reading and interpreting statistical tables, graphs and associated text
 - analysing statistical investigations
 - multivariate, bivariate and time series data
 - probability concepts.
 - 4 Assessment Specifications for this achievement standard can be accessed through the Mathematics and Statistics Resources page found at <http://www.nzqa.govt.nz/qualifications-standards/qualifications/ncea/ncea-subject-resources/>.
-

Quality Assurance

- 1 Providers and Industry Training Organisations must have been granted consent to assess by NZQA before they can register credits from assessment against achievement standards.
- 2 Organisations with consent to assess and Industry Training Organisations assessing against achievement standards must engage with the moderation system that applies to those achievement standards.

Consent and Moderation Requirements (CMR) reference

0233