Title	Use measurement to solve problems
Level	**1**	**Credits**	**3**

Purpose	This is a unit standard to assess aspects of numeracy. People credited with this unit standard are able to use measurement to solve problems. They will be able to undertake measurements such as length and capacity, calculate area and volume, and interpret location and direction, using their knowledge of the metric system, conversions, and estimation. They will also be able to establish the appropriateness of the solution to the problem.

Classification	Core Generic > Work and Study Skills

Available grade	Achieved

Guidance Information

1   For the purposes of this unit standard, *numeracy* is defined as: being competent, confident, and able to judge in everyday contexts whether to use mathematics in a particular situation and if so, what mathematics to use, how to use it, what degree of accuracy is appropriate, and what the answer means in relation to the context. Numeracy knowledge and skills are essential for mathematics in everyday family and financial matters, learning, work and community tasks, social and leisure activities.

Numeracy standards are not the same as mathematics standards.

This unit standard is one of three unit standards for numeracy. The other two are:
* Unit 26623, *Use number to solve problems*
* Unit 26626, *Interpret statistical information for a purpose*.

2   Evidence must be gathered on the basis of naturally occurring evidence from real contexts. Therefore assessment for this unit standard must not be one-off assessment events designed specifically for this purpose.

Naturally occurring evidence must be derived from activities within a learning programme and/or from a candidate's actual work performance and/or everyday life. It is important the candidate is made aware that evidence of competence may be gathered while undertaking their study or work and that this does not create undue stress for them. The assessor must be satisfied that the naturally occurring evidence can be attributed to the candidate. Naturally occurring evidence may take the form of a portfolio where the evidence has been verified. A verifier's checklist is acceptable if accompanied by evidence that includes examples from the candidate's performance.

Real contexts are part of the candidate's everyday life and may include their classroom, their workplace, and other contexts.

Evidence gathered from:
- a candidate's classroom may be sourced from different subjects or courses, or from different topics or aspects of the same course
- a candidate's workplace may be sourced from an employment focus (i.e. relating to employment documentation and conditions) or from a job-performance focus (i.e. regular work tasks)
- other contexts may be sourced from a candidate's involvement with family, sport, leisure, or community.

3   The assessor must be satisfied that the candidate has demonstrated an ongoing transferable competency against the unit standard as a whole, over a period of at least one month.

4   Problems must:
- be in a real context for the candidate (refer definition above)
- require skills at or above koru/step 5 of the *Measurement* and *Location* progressions within the *Measure and Interpret Shape and Space* strand of the *Learning Progressions for Adult Numeracy,* available at https://ako.ac.nz/alnacc.

5   Calculators, computers or other appropriate technology are permitted for assessment for this unit standard. The candidate should take their own measurements, using the measurement tool/device they have selected. When a solution is reached, the candidate must ascertain whether it is reasonable in relation to the problem.

6   Competence can be demonstrated orally, visually or in a written form.

7   Definitions
A *problem* is a real world question that can be solved using numeracy skills, where the pathway to the solution is not given.
Effective methods means that the methods used to solve problems result in a reasonable solution within a reasonable time-frame.

Outcomes and performance criteria

Outcome 1

Use measurement to solve problems.

Range   across at least three separate activities;
         problems must include but are not limited to at least one measurement for at least four of – length, capacity, mass, angle, temperature, time;
         evidence of four calculations, derived from the measurements;
         and one piece of evidence for each of – conversions within the metric system, estimation of a measurement, location defined in terms of directions and distances.

Performance criteria

1.1   Measurement tools/devices and units of measurement used are appropriate to the problems and meet the required level of accuracy.

1.2   Effective methods are selected and used to solve problems.

1.3   Appropriateness of the solution to the problem is established.

Planned review date	31 December 2025

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	20 August 2010	31 December 2014
Revision	2	15 January 2014	31 December 2019
Rollover	3	21 May 2015	31 December 2019
Review	4	18 May 2017	N/A
Rollover and Revision	5	27 January 2022	N/A

Consent and Moderation Requirements (CMR) reference	0113

This CMR can be accessed at http://www.nzqa.govt.nz/framework/search/index.do.

Comments on this unit standard

Please contact NZQA National Qualifications Services nqs@nzqa.govt.nz if you wish to suggest changes to the content of this unit standard.