



Australian Government

FSKNUM023 Estimate, measure and calculate measurements for work

Release: 1

FSKNUM023 Estimate, measure and calculate measurements for work

Modification History

Release	Comments
Release 1	This version first released with FSK Foundation Skills Training Package Version 2.0.

Application

This unit describes the skills and knowledge to estimate and measure quantities, to convert units within the metric system and between metric and non-metric units, to calculate area and volume including compound shapes, and to use Pythagoras' theorem. It includes extracting and interpreting measurement information, applying problem solving processes to complete workplace measurement tasks, and communicating workplace measurement information.

An individual performing these tasks works independently and uses support from a range of established resources.

This unit applies to individuals who use, or are preparing to use, numeracy skills to complete workplace activities. This includes existing workers and individuals preparing for employment through vocational education and training. This unit should be integrated and contextualised with vocational training to support achievement of vocational competency.

This unit is aligned to, but does not fully address, the Australian Core Skills Framework (ACSF) numeracy core skill indicators .09, .10 and .11 at level 4 in the workplace and employment domain of communication.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Numeracy

Elements and Performance Criteria

Element	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Extract and interpret complex workplace	1.1 Extract a range of measurement information embedded in workplace tasks and texts in order to complete workplace

Element	Performance Criteria
measurement information	measurement task 1.2 Interpret a range of measurement information embedded in workplace tasks and texts in order to complete workplace measurement task
2. Complete workplace measurement tasks	2.1 Select mathematical and problem solving strategies to undertake workplace measurement task 2.2 Estimate measurements and outcomes to complete workplace task 2.3 Select and use relevant measurement equipment to take accurate workplace measurements 2.4 Calculate with measurements to complete workplace task, including conversions of metric units 2.5 Check and reflect on mathematics used, outcomes, initial estimates and workplace implications using estimation and evaluation techniques
3. Communicate workplace measurement information	3.1 Use formal, informal and some specialised written mathematical representation to document, interpret and communicate workplace measurement processes, results and implications 3.2 Use formal, informal and some specialised mathematical language to discuss and explain workplace measurement processes, results and implications

Foundation Skills

This section describes language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Learning	Sequencing multi-step calculations
Technology	Using a scientific calculator

Mapping Information

Supersedes and is equivalent to FSKNUM23 Estimate, measure and calculate measurements for work.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=f572fe10-a855-4986-9295-3852c771f178>

Assessment Requirements for FSKNUM023 Estimate, measure and calculate measurements for work

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- extract and interpret metric and relevant non-metric measurement information and units of measurement embedded in a complex workplace text or task related to area and volume
- perform complex measurements to complete a workplace task, including:
 - identifying and selecting relevant measurement tools and equipment appropriate to the workplace task
 - estimating the expected outcome prior to undertaking measurement and calculation
 - performing calculations with measurements, including:
 - converting between metric units
 - converting between metric and routine non-metric units
 - calculating the sides of right angle triangles using Pythagoras' theorem
 - 2D shapes, one of which must be a compound shape, using relevant routine formulas compound shape
 - calculating the volume of prisms and compound 3D shapes using relevant routine formulas compound 3D shapes.

In the course of the above the candidate must demonstrate use of relevant technology, such as calculators or spreadsheets.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- purpose of workplace measurement relevant to meeting workplace objectives
- purpose and meaning of metric and non-metric unit prefixes
- purpose, function, selection, set up and safe use of routine measurement tools and equipment
- methods to estimate, measure and calculate measurements

- names and basic properties of a range of 2D and 3D shapes
- relevant routine formulae to calculate areas and volumes
- purpose and application of Pythagoras' theorem
- mathematical symbols relevant to the task undertaken in the performance evidence
- estimation and evaluation processes
- implications of measurements, calculations and results for workplace tasks
- specialised, formal and informal mathematical written and oral language and symbolism of measurement
- relevant technology, such as calculators or spreadsheets.
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Assessment Conditions

Competency is to be assessed in the workplace, a workplace simulated environment or a vocational training context.

Assistive technologies can be utilised to assist with oral and written communication.

Skills must be demonstrated using complex texts and tasks that reflect those typically found in a workplace.

The following resources are to be made available:

- a calculator
- measuring equipment relevant to workplace
- range of established familiar support resources.

Assessors must:

- satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards, and
- have sound knowledge of the ACSF and performance features of the ACSF level being assessed, and
- have demonstrable expertise, knowledge and skills in the vocational contextualisation and assessment of the core skill, numeracy, and
- have completed the following or equivalent:
 - TAESS00009 Address Foundation Skills in Vocational Practice Skill Set; or
 - a higher level education qualification, such as:
 - TAE80113 Graduate Diploma of Adult Language, Literacy and Numeracy Practice (and its equivalent TAE70111); or
 - Bachelor of Education, Graduate Certificate or Graduate Diploma of Education, or higher. This may include qualifications relating to TESOL, adult education or vocational education.

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