



Australian Government

FSKNUM021 Apply an expanding range of arithmetical calculations for work

Release: 1

FSKNUM021 Apply an expanding range of arithmetical calculations 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 extract and evaluate mathematical information and undertake a range of arithmetical calculations, including with a range of rational numbers, including positive and negative numbers, powers and roots. It includes extracting and interpreting mathematical information, applying mathematical problem solving processes to complete workplace tasks, and communicating workplace mathematical 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 a range of mathematical	1.1 Extract a range of mathematical information embedded in

Element	Performance Criteria
information	workplace tasks and texts 1.2 Interpret a range of mathematical information embedded in workplace tasks and texts
2. Apply and use mathematical calculations involving multiple steps to complete workplace task	2.1 Select and use a range of mathematical problem solving strategies to undertake workplace task 2.2 Estimate outcome of calculations related to fractions, decimals, percentages, simple powers, common roots and positive and negative numbers to complete workplace task 2.3 Perform calculations with fractions, decimals, percentages, simple powers, common roots and positive and negative numbers to complete workplace task 2.4 Check and reflect on mathematical problem solving processes and outcomes in relation to initial estimates and the workplace context
3. Communicate workplace mathematical information	3.1 Use formal, informal and some specialised mathematical representation to document and communicate workplace calculation processes, results and implications 3.2 Use formal, informal and some specialised language to discuss and explain workplace calculation 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
Technology	• Uses a scientific calculator

Mapping Information

Supersedes and is equivalent to FSKNUM21 Apply an expanding range of mathematical calculations 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 FSKNUM021 Apply an expanding range of arithmetical calculations 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:

- perform multi-step mathematical problem solving processes to complete a complex workplace task including:
 - performing multi-step calculations with relevant positive and negative numbers using the four operations, including:
 - fractions, decimals and percentages
 - powers and roots
 - positive and negative numbers
 - making estimations to check problem solving outcomes of above calculations and determine appropriate accuracy required for task
 - evaluating mathematical processes used and outcomes obtained, and evaluating implications for workplace task.

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:

- problem solving processes to solve workplace mathematical problems
- equivalent value of fractions, decimals and percentages
- powers and roots, and the relationship between powers and roots
- workplace application of negative numbers
- order of operations and use of brackets and parentheses
- estimation and assessment processes
- implications of calculations and results for workplace tasks
- specialised, formal and informal mathematical written and oral language and symbolism relevant to workplace calculations

- 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
- own 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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