



Australian Government

FSKNUM022 Use ratios, rates and proportions for complex workplace tasks

Release: 1

FSKNUM022 Use ratios, rates and proportions for complex workplace tasks

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 required to solve problems and calculate with rates, ratios and proportions. It includes extracting and interpreting ratio, rate and proportional information, applying 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 ratios, rates and	1.1 Extract ratios, rates and proportional reasoning information embedded in a range of workplace tasks and texts

Element	Performance Criteria
proportional information	1.2 Interpret ratios, rates and proportional reasoning information embedded in a range of workplace tasks and texts
2. Apply a range of mathematical problem solving processes involving ratios, rates and proportions to complete workplace task	2.1 Select and use a range of mathematical and problem solving strategies to undertake workplace task 2.2 Estimate outcome of calculations related to ratios, rates and proportions to complete workplace task 2.3 Perform calculations with ratios, rates and proportions in mathematical processes to solve workplace problems 2.4 Check and reflect on mathematical problem solving processes and outcomes in relation to initial estimates and the workplace context
3. Communicate workplace ratio, rate and proportion information	3.1 Use formal, informal and some specialised mathematical representation to document and communicate workplace ratio, rate and proportional reasoning processes, results and implications 3.2 Use formal, informal and some specialised mathematical language to discuss and explain workplace ratio, rate and proportional reasoning 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.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Mapping Information

Supersedes and is equivalent to FSKNUM22 Use and apply ratios, rates and proportions 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 FSKNUM022 Use ratios, rates and proportions for complex workplace tasks

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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 with ratios, rates and proportions to complete a complex workplace task, including:
 - calculating using ratios, rates and proportions
 - making estimations to check problem solving outcomes and determine appropriate accuracy required for task
 - evaluating mathematical processes used and outcomes obtained, and evaluating implications for workplace task.
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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:

- use and purpose of typical ratios, rates and proportions in complex workplace tasks
- relationship between ratios, rates and proportions
- different representations of ratios and rates
- methods to simplify and compare quantities using ratios
- methods of calculation with ratios, rates and proportions
- estimation and evaluation processes
- implications of calculations and results for workplace tasks
- specialised, formal and informal mathematical written and oral language and symbolism relevant to ratios, rates and proportions.
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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 independently, 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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Links

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