



Australian Government

FSKNUM034 Use and apply concepts of probability for work

Release: 1

FSKNUM034 Use and apply concepts of probability 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 calculate and interpret probability events and the outcomes associated with numerical and qualitative data. It includes extracting and analysing information relevant to probability events, calculating complex probabilities, and communicating probability information.

An individual performing these tasks works autonomously and accesses and evaluates support from a broad range of sources as needed.

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 5 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 analyse information relevant to probability	1.1 Extract highly embedded mathematical information related to probability from a broad range of complex workplace texts and tasks 1.2 Analyse and synthesise information related to probability

Element	Performance Criteria
	required to complete workplace task 1.3 Incorporate information from other sources to inform and support analysis of the extracted information, where necessary
2. Calculate complex probabilities for workplace tasks	2.1 Select method of solution from an expanded range of highly developed mathematical problem solving strategies and processes to complete workplace task 2.2 Identify workplace task/event requiring probability calculation and estimate probability 2.3 Conduct experiments and display results 2.4 Calculate experimental probabilities of single events and simple multiple events 2.5 Calculate theoretical probabilities of single events and simple multiple events 2.6 Check and reflect on mathematics used, outcomes, and workplace implications of findings using evaluation techniques
3. Communicate probability	3.1 Use formal and specialised written mathematical representation and symbolism to document, interpret and communicate mathematical thinking, problem solving process, outcomes and implications 3.2 Use specialised mathematical and general language to discuss, explain and interpret the mathematical 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 FSKNUM34 Use and apply concepts of probability 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 FSKNUM034 Use and apply concepts of probability 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 a broad range of multi-step mathematical problem solving processes to apply knowledge of probability to a relevant workplace task, including:
 - conducting experiments and evaluating experimental probability of events
 - displaying results of experiments in tables or diagrams
 - calculating theoretical probabilities
 - analysing the difference between theoretical and experimental probabilities associated with workplace problems
 - making estimations to check problem solving outcomes and determine appropriate accuracy required for task
 - critically reviewing mathematical processes and outcomes obtained, and evaluate real-world implications.
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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:

- concepts and terminology of probability and chance
- common workplace events involving chance
- methods to conduct experiments
- range of probability values
- use of theoretical and experimental probabilities
- mutually exclusive events
- techniques to display results such as tree diagrams
- purpose and use of relevant technology such as CAS calculator, spreadsheets or other mathematical or workplace software

- developed estimation and evaluation processes and implications of calculations and results for workplace tasks
- specialised and formal mathematical written language and symbolism relevant to workplace task
- specialised mathematical oral language relevant to workplace task.
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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 highly 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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