



Australian Government

FSKNUM039 Use introductory calculus for work

Release: 1

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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 apply basic concepts of calculus to work-related problems. It includes extracting and analysing mathematical information relevant to calculus, applying calculus techniques to the solution of workplace problems, and communicating the mathematical 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 introductory calculus	1.1 Extract highly embedded mathematical information relevant to introductory calculus from a broad range of highly complex workplace texts and tasks 1.2 Incorporate information from other sources to inform and support

Element	Performance Criteria
	analysis of the extracted information, where necessary 1.3 Analyse and synthesise information relevant to introductory calculus required to complete workplace task
2. Calculate limits and find simple derivatives 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 Estimate outcome of analysis related to using specialised mathematical problem solving strategies and application of introductory calculus based analysis to complete workplace task 2.3 Evaluate, solve and sketch functions relevant to workplace 2.4 Find limits relevant to workplace 2.5 Differentiate simple polynomial functions and use correct notation 2.6 Check outcomes and critically review mathematics used and real-world implications of results using developed estimation and evaluation techniques
3. Communicate information	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.

Skill	Description
Technology	Uses a scientific calculator and/or graphing software

Mapping Information

Supersedes and is equivalent to FSKNUM39 Use introductory calculus for work.

Links

Companion Volume Implementation Guide is found on VETNet -

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