



**Australian Government**

# **FSKNUM029 Use introductory graphical techniques for work**

**Release: 1**

## FSKNUM029 Use introductory graphical techniques 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 use Cartesian coordinates to graph straight lines and to use straight line graphs in practical workplace situations. It includes extracting and interpreting information relevant to linear relationships, using linear equations and graphs, and communicating 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 information relevant to linear relationships in the workplace | 1.1 Identify and interpret mathematical information and measures, quantities and/or variables to be analysed and evaluated using linear graphical analysis<br>1.2 Identify the appropriate techniques to interpret mathematical |

| Element                                            | Performance Criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                    | information relevant to undertake linear relationships embedded in workplace tasks and texts to complete workplace task                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 2. Use linear equations and their graphs           | <p>2.1 Select and use a range of algebraic, graphical and problem solving strategies to undertake workplace task</p> <p>2.2 Estimate outcome of the analysis related to the application of the routine linear graphical analysis to the workplace task</p> <p>2.3 Identify and model simple workplace situations involving linear relationships by drawing Cartesian coordinate graphs</p> <p>2.4 Solve and interpret simple linear equations graphically</p> <p>2.5 Check and reflect on mathematics used, outcomes, and workplace and real-world implications</p> |
| 3. Communicate information from graphical analysis | <p>3.1 Use formal, informal and some specialised written mathematical representation to document, interpret and communicate workplace graphical processes, results and implications</p> <p>3.2 Use formal, informal and some specialised mathematical language to discuss and explain workplace graphical processes, results and implications</p>                                                                                                                                                                                                                   |

## 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 FSKNUM29 Use introductory graphical techniques 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 FSKNUM029 Use introductory graphical techniques 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 involving linear relationships to complete a complex workplace task, including:
  - identifying applications and variable that can be analysed using linear relationships in the workplace and
  - collecting data and modelling via graphing the situations and variables with the use of linear equations
  - analysing and interpreting the resulting graphical analysis, relationships and outcomes
  - making estimations to check problem solving outcomes and determine appropriate accuracy required for task
  - evaluating mathematic processes used and outcomes obtained, and evaluating implications for workplace task
  - use of relevant technology, applications or computer software.
  -

### 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:

- common workplace issues that can be investigated through the use of linear graphical analysis
- informal and formal symbolic notation, representation and conventions of Cartesian graphs (origin, axes, coordinates)
- purpose and application of algebraic expressions and formulae to workplace tasks
- common linear relationships relevant to workplace
- purpose and use of relevant technology, such as scientific or CAS calculator, spreadsheets or graphing software
- estimation and evaluation processes

- implications of calculations and results for workplace tasks
- specialised, formal and informal mathematical written and oral language and symbolism.
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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 scientific calculator, computer software or paper Cartesian plane
- data utilised in the performance evidence
- 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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