



Australian Government

FSKNUM024 Use geometry to draw 2D shapes and construct 3D shapes 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 use angle properties and symmetry to analyse and draw two dimensional (2D) shapes and construct three dimensional (3D) shapes for workplace practices. It includes extracting and interpreting shape and angle information, completing workplace tasks with shapes, 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 workplace shape	1.1 Extract and interpret a range of 2D and 3D shapes embedded in a range of complex workplace tasks and texts to complete workplace

Element	Performance Criteria
information	task 1.2 Extract and interpret angle and symmetry properties embedded in a range of complex workplace tasks and texts
2. Complete workplace tasks with shapes	2.1 Select mathematical and problem solving strategies to undertake workplace task 2.2 Select relevant tools and equipment to draw and construct angles and shapes 2.3 Draw, estimate and measure to create 2D shapes for work using drawing tools or software 2.4 Draw, estimate and measure to construct 3D shapes for work using drawing tools or software 2.5 Check and reflect on mathematics used, outcomes, and workplace implications using estimation and evaluation techniques
3. Communicate workplace shape information	3.1 Use formal, informal and some specialised written mathematical representation to document, interpret and communicate about geometry and shapes in workplace processes, results and implications 3.2 Use formal, informal and some specialised mathematical language about geometry and shape to discuss and explain workplace 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 FSKNUM24 Use geometry to draw 2D shapes and construct 3D shapes 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 FSKNUM024 Use geometry to draw 2D shapes and construct 3D shapes 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:

- extract and interpret each of the following embedded in a complex workplace text or task:
 - 2D shapes, including compound 2D shapes
 - 3D shapes, including compound 3D shapes
 - properties of angles, symmetry and similarity
- perform mathematical processes to complete complex workplace tasks, including:
 - identifying features and properties of 2D and 3D shapes including the properties of angle and symmetry
 - using angle properties to evaluate unknown angles in shapes
 - drawing 2D shapes, including compound shapes, using geometric instruments
 - drawing and constructing 3D shapes, including compound shapes, using geometric instruments.

In the course of the above the candidate must demonstrate use of relevant technology, such as appropriate computer aided drawing technology or 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:

- purpose and application of geometric shapes to workplace tasks
- features and properties of 2D and 3D shapes, including compound shapes
- properties and types of lines and angles and symmetry principles
- techniques to draw 2D shapes and construct 3D shapes
- estimation and assessment processes
- implications of drawings, constructions and results for workplace tasks
- specialised, formal and informal mathematical written and oral language and symbolism of shapes and angles

- relevant technology, such as appropriate computer aided drawing technology or software.
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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:

- geometric instruments utilised in the performance evidence
- resources to draw and construct shapes 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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Links

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