



**Australian Government**

**Assessment Requirements for MEM12026  
Perform advanced trade calculations in a  
manufacturing, engineering or related  
environment**

**Release: 1**

# Assessment Requirements for MEM12026 Perform advanced trade calculations in a manufacturing, engineering or related environment

## Modification History

Release 1. New unit

## Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures and safe work practices
- obtaining and interpreting data from specifications, drawings, job sheets or work instructions to establish required outcomes
- determining the appropriate calculation method to suit the application
- performing calculations using:
  - trigonometric ratios
  - Pythagoras Theorem
  - geometric formulae
- manipulation of formulae to change the subject
- checking answers using estimations.

## Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe work practices and procedures
- formulae applicable to the determination of perimeter, area and volume of simple geometric shapes
- the reasons for ensuring calculations are carried out using the same units of measurement
- nomenclature used in trigonometry, Pythagoras' Theorem and geometry
- mathematical principles and order of operations
- techniques and procedures for rounding off figures when estimating approximate answers
- applications of geometric calculations in manufacturing and engineering situations.

## Assessment Conditions

- Assessors must:
  - have vocational competency in performing computations at least to the level being assessed with relevant industry knowledge and experience

- satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires
- Where possible assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

## Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>