



Australian Government

Assessment Requirements for MEM12025
Use graphical techniques and perform
simple statistical computations

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MEM12025A Use graphical techniques and perform simple statistical computations

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 (SOPs) and safe work practices
- obtaining and interpreting data presented in graphical form and analysing the emerging trends indicated by the data
- constructing graphs to scale for which the graph is intended and labelling the axis appropriately
- constructing graphs to suit the job requirements
- performing basic statistical calculations, including mean, median and mode and determining from that data the standard deviation
- undertaking numerical operations, geometry, calculations and formula for using graphical techniques and performing simple statistical computations
- applying standard deviation to process improvement techniques in which error rates are mathematically calculated and recorded
- checking performance to specifications.

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
- characteristics of straight line, parabolic and hyperbolic curves
- procedures for determining the slope/rate of change of a curve
- trends indicated by changes in gradient of a graph
- procedures for drawing the line of best fit for the coordinates plotted
- standard form of equations relating to straight lines and parabolic curves
- gradient, intercepts, maximum and minimum values and limit lines for straight line and parabolic curves
- function of control charts
- meaning of the terms mean, median and mode
- meaning of the term standard deviation

- significance of 1, 2 and 3 sigma limits.

Assessment Conditions

- Assessors must:
 - have vocational competency in using graphical techniques and performing simple statistical 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>