Australian Government

MEM12024 Perform computations

Release: 1

MEM12024 Perform computations

Modification History

Release 1. Supersedes and is equivalent to MEM12024A Perform computations

Application

This unit of competency defines the skills and knowledge required to estimate approximate answers to arithmetical problems, carry out calculations involving percentages and proportions, and determine simple ratios and averages.

It also covers producing and interpreting simple charts and graphs in manufacturing, engineering or related environments.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Band: **A**

Unit Weight: **3**

Pre-requisite Unit

MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006	Organise and communicate information

Competency Field

Measurement

Elements and Performance Criteria

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.	
1 **Determine job requirements**	1.1	Follow standard operating procedures (SOPs)
	1.2	Comply with work health and safety (WHS) requirements at all times
	1.3	Identify job requirements from specifications, sketches, job sheets or work instructions
	1.4	Establish required calculation outcomes from job

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		instructions
	1.5	Determine required calculation method to suit the application, including selection of relevant arithmetic operations and/or formulae
	1.6	Estimate expected results, including rounding off, as appropriate
2	**Perform calculations**	
	2.1	Apply calculation method
	2.2	Obtain answer and check against estimation to ensure it is correct
3	**Produce charts and graphs from given information**	
	3.1	Transpose data to produce charts or graphs
	3.2	Ensure charts or graphs reflect data on which they are based to meet specifications

Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Calculations are performed using one (1) or more of the following:	- pen and paper - a calculator - tables - tablets - computers

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Relevant sources include one (1) or more of the following:	• charts • graphs • diagrams • measurement data • reference manuals • specifications
Applications include computations associated with one (1) or more of the following:	• pressure • volume • temperature • heat • speed • power • elasticity • density • mass • force
Arithmetic operations include the following:	• application of subtraction, addition, multiplication and division • manipulation of decimals, fractions and mixed numbers and whole numbers • using formulas • determining percentages • calculation of proportions and ratios
Charts and graphs include one (1) or more of the following:	• simple histograms • control charts • pie charts

Unit Mapping Information

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Links

Companion Volume implementation guides are found in VETNet -
https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2

Manufacturing Industry Skills Alliance