# Knowledge Assessment

**Event 1 of 3**

## Criteria

### Unit code, name and release number

MEM09002 - Interpret technical drawing (1)

### Qualification/Course code, name and release number

MEM30319 - Certificate III in Engineering - Fabrication Trade (1)

## Student details

### Student number

### Student name

## Assessment Declaration

* This assessment is my original work and no part of it has been copied from any other source except where due acknowledgement is made.
* No part of this assessment has been written for me by any other person except where such collaboration has been authorised by the assessor concerned.
* I understand that plagiarism is the presentation of the work, idea or creation of another person as though it is your own. Plagiarism occurs when the origin of the material used is not appropriately cited. No part of this assessment is plagiarised.

### Student signature and Date

Version: *1.0*

Date created: *6 July 2018*

Date modified: *06/11/2019*

For queries, please contact:

*SkillsPoint – IMRS*

*Location – Block B Level 1 Hamilton TAFE Newcastle*

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## Assessment instructions

Table 1 Assessment instructions

| Assessment details | Instructions |
| --- | --- |
| **Assessment overview** | The objective of this assessment is to assess your knowledge as would be required to Interpret technical drawings. |
| **Assessment Event number** | 1 of 3 |
| **Instructions for this assessment** | This is a written assessment and it will be assessing you on your knowledge of the unit.  This assessment is in 4 parts:   1. Multiple choice questions 2. True or False questions 3. Short answer questions 4. Assessment feedback |
| **Submission instructions** | On completion of this assessment, you are required to upload it or hand it to your trainer for marking.  It is important that you keep a copy of all electronic and hardcopy assessments submitted to TAFE and complete the assessment declaration when submitting the assessment. |
| **What do I need to do to achieve a satisfactory result?** | To achieve a satisfactory result for this assessment all questions must be answered correctly. |
| **What do I need to provide?** | Calculator, pens, pencil, eraser, |
| **Due date/time allowed** | 75 minutes |
| **Assessment feedback, review or appeals** | Appeals are addressed in accordance with [Assessment Guidelines for TAFE NSW](https://staff.tafensw.edu.au/documents/2017/11/assessment-guidelines-v02.pdf/). |

## Part 1: Multiple choice

Read the question and each answer carefully. Put an X in the table next to your chosen answer.

1. Safe work practices should be applied for all workplace activities. From the list below select two (2) safe work practices that would apply when interpreting technical drawings in a fabrication workshop.

Table 2 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. Selecting a work space away from sources of ignition |  |
| 1. Selecting a workspace that is well lit |  |
| 1. Spreading drawings across a recently welded item |  |
| 1. Storing drawings in a welding bay |  |

1. From the list below select the Australian Standard that applies to Technical Drawing General Principles.

Table 3 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. AS 1100.101 |  |
| 1. AS 1554 GP |  |
| 1. AS 1554 SP |  |
| 1. Engineering Australia Code of Practice (C.O.P) |  |

1. In the table below match the welding symbol to the correct instruction.

Table 4 Multiple choice

| Answer choices | Welding Symbol | Put X next to your answer |
| --- | --- | --- |
| 1. Fillet weld same side of joint |  |  |
| 1. Fillet weld opposite of joint |  |
| 1. Fillet weld either side of joint |  |
| 1. Fillet weld outside corner joint |  |

1. In the table below match the welding symbol to the correct instruction.

Table 5 Multiple choice

| Answer choices | Welding Symbol | Put X next to your answer |
| --- | --- | --- |
| 1. Weld the hole all round |  |  |
| 1. Leave a hole unwelded |  |
| 1. Fillet weld all round |  |
| 1. Weld a circle fillet |  |

1. In the table below the welding symbol flag indicates:

Table 6 Multiple choice

| Answer choices | Welding Symbol | Put X next to your answer |
| --- | --- | --- |
| 1. Unequal fillet weld |  |  |
| 1. Fillet weld full penetration |  |
| 1. Weld on site |  |
| 1. Weld and flag as compliant to AS1554 |  |

1. Conventions are commonly used in technical drawings to represent components, or repetitive features of components. From the table below select the description which matches the conventional representation.

Table 7 Multiple choice

|  |  |  |
| --- | --- | --- |
| **Conventional Representation** | **Description** | **Put X next to your answer** |
|  | 1. Circular Pitch |  |
| 1. External Thread |  |
| 1. Internal Thread |  |
| 1. Pipe Run |  |
|  | 1. Circular Pitch |  |
| 1. External Thread |  |
| 1. Internal Thread |  |
| 1. Pipe Run |  |
|  | 1. Circular Pitch |  |
| 1. External Thread |  |
| 1. Internal Thread |  |
| 1. Pipe Run |  |
|  | 1. Circular Pitch |  |
| 1. External Thread |  |
| 1. Internal Thread |  |
| 1. Pipe Run |  |

**Refer to Drawing 09204-T5-1 and answer questions 7 to 9.**

1. How many items make up the stair assembly?

Table 8 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. 1 item |  |
| 1. 2 items |  |
| 1. 7 items |  |
| 1. 4 items |  |

1. How many parts (QTY) in total are required for a complete stair assembly?

Table 9 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. 1 part |  |
| 1. 2 parts |  |
| 1. 16 parts |  |
| 1. 23 parts |  |

1. What is the total mass of the Hand railing:

Table 10 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. 224.465 kg |  |
| 1. 49.758 kg |  |
| 1. 47.958 kg |  |
| 1. 45. 958 kg |  |

**Refer to Drawing 09204-T5-2 and answer questions 10 to 12.**

1. All structural welds full penetration bevel or butt welds conform to what Australian Standard (AS) unless noted otherwise (UNO)?

Table 11 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. AS 1657 |  |
| 1. AS 1554-1-SP |  |
| 1. AS 1554-1-GP |  |
| 1. AS 1250 – 8.8/TS |  |

1. What size masonry anchors bolt the stairwell to the concrete structure?

Table 12 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. M16 |  |
| 1. M18 |  |
| 1. M6 |  |
| 1. M12 |  |

1. How many masonry anchors bolt the stairwell to the concrete structure?

Table 13 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. 6 |  |
| 1. 16 |  |
| 1. 18 |  |
| 1. 12 |  |

**Refer to Drawing 09204-T5-3 and answer questions 13 to 16.**

1. What type of material are the stair treads made from?

Table 14 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. Diamond plate 6 long |  |
| 1. 200 PFC |  |
| 1. 300 PFC |  |
| 1. Diamond plate 6 thick |  |

1. What does the PFC abbreviation on the drawing stand for?

Table 15 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. Part Formed Channel |  |
| 1. Parallel Flanged Channel |  |
| 1. Parallel Flanged C Section |  |
| 1. Part Flanged Channel |  |

1. What is the height of the Stair Assembly from the concrete structure at ground level to the top platform?

Table 16 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. 2316 |  |
| 1. 1105 |  |
| 1. 3630.5 |  |
| 1. 2492 |  |

1. What is the rise of each stair tread?

Table 17 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. 264 |  |
| 1. 178 |  |
| 1. 187 |  |
| 1. 246 |  |

1. From the pictorial drawing shown below left select the correct view names:

Table 18 Multiple choice

| Pictorial (Below) and Multiple Views in Third Angle  Projection. | | View Selection | Answer Choices | Put X next to your answer |
| --- | --- | --- | --- | --- |
|  |  | View A | a) Front View |  |
| b) Top View |  |
| c) Left Side View |  |
| d) Right Side View |  |
| View B | a) Front View |  |
|  |  | b) Top View |  |
| c) Left Side View |  |
| d) Right Side View |  |
| View D | a) Front View |  |
| b) Top View |  |
| c) Left Side View |  |
| d) Right Side View |  |

1. On the drawing shown below a symbol has been circled . What does this symbol indicate requires to be carried out to the object?

Table 19.0 Multiple choice

|  |  |  |
| --- | --- | --- |
| Answer choices | Drawing | Put X next to your answer |
| 1. Fillet weld the plate to the channel |  |  |
| 1. Butt weld the plate to the channel |  |
| 1. Machined surface |  |
| 1. Welded surface |  |

1. The General Notes shown below indicate the size of the fillet welds U.N.O. What unit of measurement is used for the fillet weld size?

Table 20.0 Multiple choice

|  |  |  |
| --- | --- | --- |
| Answer choices | General Notes | Put X next to your answer |
| 1. Micrometres |  |  |
| 1. Millimetres |  |
| 1. Metres |  |
| 1. Centimetres |  |

1. What does the abbreviation U.N.O mean in the GENERAL NOTES above?

Table 21 Multiple choice

| Answer choices | Put X next to your answer |
| --- | --- |
| 1. Unless Known Otherwise |  |
| 1. Unit Number Otherwise |  |
| 1. Unless Not Otherwise |  |
| 1. Unless Noted Otherwise |  |

## Part 2: True or false

Table 1 True or false

| Question | | Write *True* or *False* |
| --- | --- | --- |
| 1. When carrying out technical drawing interpretation in a fabrication workshop the use of Personal Protective Equipment (PPE) is not required | |  |
| 2. AS: 1102 Graphical Symbols would be a reliable source of information to check the meaning of a complex weld symbol | |  |
| 3. The symbol shown right represents diameter |  |  |
| 4. The symbol shown right represents 1st Angle Projection |  |  |
| 5. The symbol shown right is a Datum Identification |  |  |
| 6. The symbol shown right indicates a slope |  |  |
| 7. The symbol shown right indicates a taper |  |  |

## Part 3: Short answer

Read the question carefully. Your answer should be a minimum of 2 words but no longer than 10 words. Please refer to the drawing on the following page to answer these questions in Part 3.

1. What are the overall dimensions of the object?

|  |  |
| --- | --- |
| 1. Total Length = |  |
| 1. Total Height = |  |
| 1. Total Width = |  |

1. How many holes are shown on the drawing?

|  |  |
| --- | --- |
| Total number of holes= |  |

1. What are the diameters of the largest and smallest holes shown?

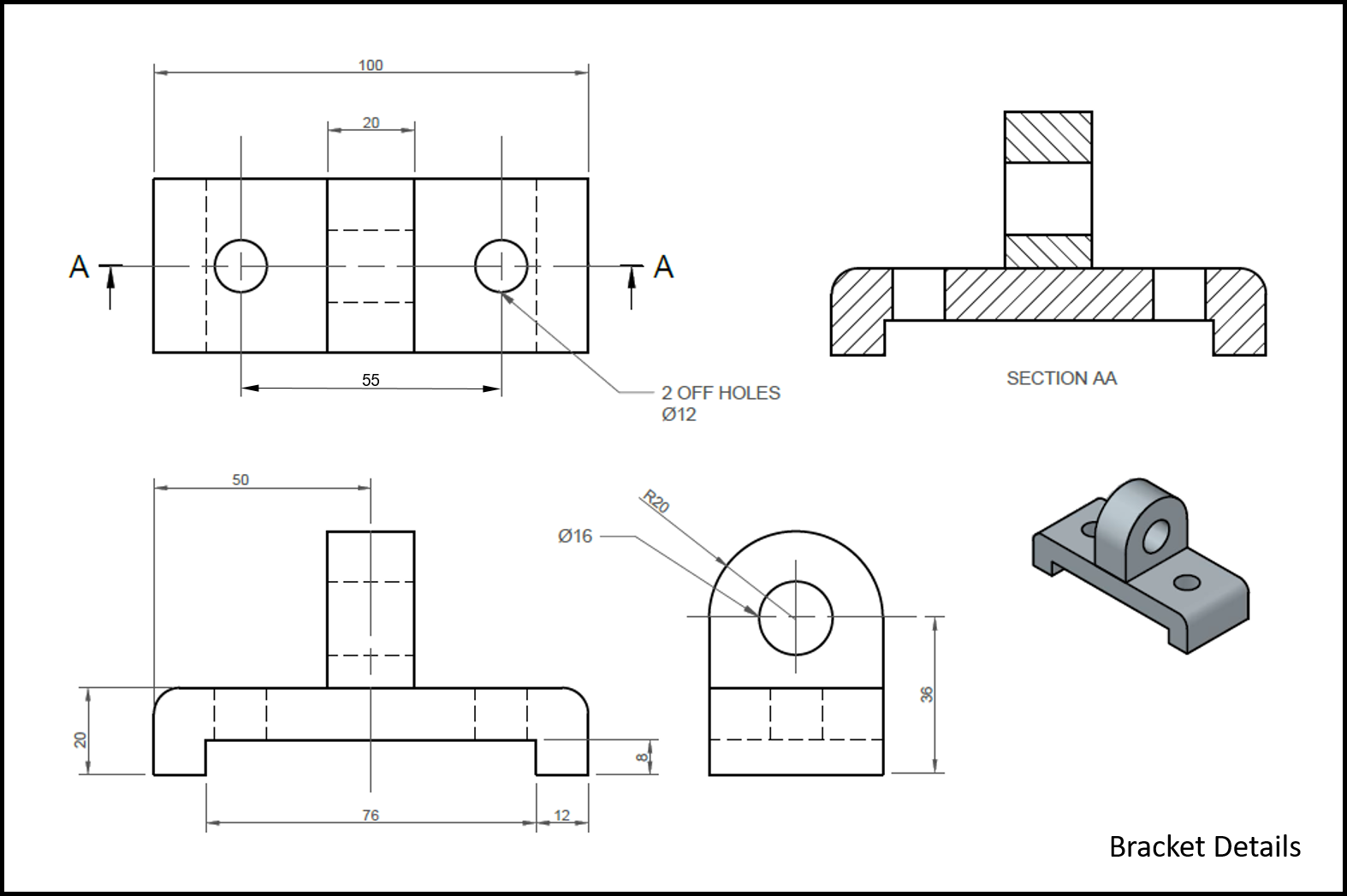
|  |  |
| --- | --- |
| 1. Largest hole diameter = |  |
| 1. Smallest hole diameter = |  |

1. What are the sloping lines called in SECTION AA?

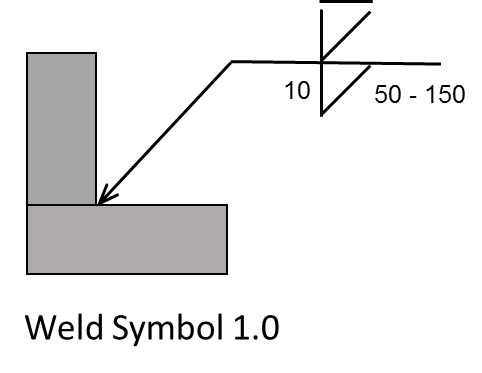
|  |
| --- |
|  |

1. What is the distance from the left hand edge of the bracket to the centreline of the first hole?

|  |
| --- |
|  |



**Refer to the Weld Symbol 1.0 Below and answer the following questions:**



1. What type of weld goes on the same side of the joint?

|  |
| --- |
|  |

1. What size is the weld on the same side of the joint?

|  |
| --- |
|  |

1. What is the length of the weld on the same side of the joint?

|  |
| --- |
|  |

1. What is pitch distance between welds on the same side of the joint?

|  |
| --- |
|  |

1. How is the plate prepared on the other side of the joint?

|  |
| --- |
|  |

1. How is the weld finished on the other side of the joint?

|  |
| --- |
|  |

## Part 4: Assessment Feedback

*NOTE: This section* ***must*** *have the assessor signature and student signature to complete the feedback.*

### Assessment outcome

Satisfactory

Unsatisfactory

### Assessor Feedback

Was the assessment event successfully completed?

If no, was the resubmission/re-assessment successfully completed?

Was reasonable adjustment in place for this assessment event?  
*If yes, ensure it is detailed on the assessment document.*

Comments:

### Assessor name, signature and date:

### Student acknowledgement of assessment outcome

Would you like to make any comments about this assessment?

### Student name, signature and date

***NOTE: Make sure you have written your name at the bottom of each page of your submission before attaching the cover sheet and submitting to your assessor for marking.***