

Cambridge IGCSE™

DESIGN & TECHNOLOGY**0445/52**

Paper 5 Graphic Products

October/November 2025

MARK SCHEME

Maximum Mark: 50

Published

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge International will not enter into discussions about these mark schemes.

Cambridge International is publishing the mark schemes for the October/November 2025 series for most Cambridge IGCSE, Cambridge International A and AS Level components, and some Cambridge O Level components.

This document consists of **9** printed pages.

PUBLISHED**Generic Marking Principles**

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptions for a question. Each question paper and mark scheme will also comply with these marking principles.

GENERIC MARKING PRINCIPLE 1:

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

GENERIC MARKING PRINCIPLE 2:

Marks awarded are always **whole marks** (not half marks, or other fractions).

GENERIC MARKING PRINCIPLE 3:

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

GENERIC MARKING PRINCIPLE 4:

Rules must be applied consistently, e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

GENERIC MARKING PRINCIPLE 5:

Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).

GENERIC MARKING PRINCIPLE 6:

Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

Annotations guidance for centres

Examiners use a system of annotations as a shorthand for communicating their marking decisions to one another. Examiners are trained during the standardisation process on how and when to use annotations. The purpose of annotations is to inform the standardisation and monitoring processes and guide the supervising examiners when they are checking the work of examiners within their team. The meaning of annotations and how they are used is specific to each component and is understood by all examiners who mark the component.

We publish annotations in our mark schemes to help centres understand the annotations they may see on copies of scripts. Note that there may not be a direct correlation between the number of annotations on a script and the mark awarded. Similarly, the use of an annotation may not be an indication of the quality of the response.

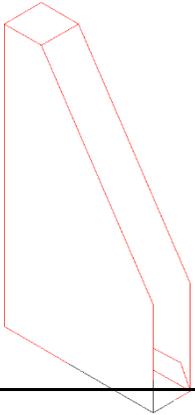
The annotations listed below were available to examiners marking this component in this series.

Annotations

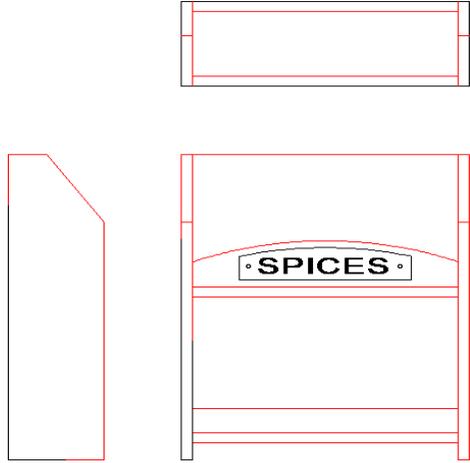
Annotation	Meaning
	Incorrect point
	Indicates that the point has been noted, but no credit has been given
	Correct point
Numbers	Indicating the mark allocated for the response

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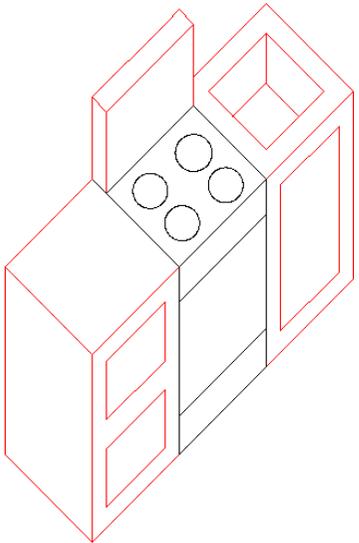
Question	Answer	Marks	Guidance
A1(a)	Right angle triangle correct width or length [1] Triangle correct to overlay [1]	2	
A1(b)	Rectangle correct size 45×16 [1] Rectangle drawn in correct position [1] Thin end of slotted plate 26 mm wide, central and in correct position [1] Thick end of slotted plate 56 mm wide, central and 50 mm above thin end [1] Both diagonal side edges correct to candidate solution [1]	5	
A1(c)	Handle correct to overlay [1] Rectangle 50×30 [1] Rectangle in correct position (75 mm above base of handle) [1] Corner 15×15 [1]	4	
A1(d)	Circle correct $\varnothing 180$ in correct position [1]	1	
A1(e)	Any hexagon added [1] Any regular hexagon added in correct orientation [1] Hexagon correct to overlay [1]	3	

Question	Answer	Marks	Guidance
A2	<p>Isometric shape drawn 140 high [1] 80 deep [1] 20 wide [1] Two identical corner angles added to correct size [1] Top face correct to overlay / candidate solution [1] Internal lines added correct to overlay / candidate solution [1] Glue flap add to internal corner at top or base [1]</p> <p>First 3 marks must be drawn in isometric</p>	7	

Question	Answer	Marks	Guidance
A3(a)	<p>Use of straight edge / ruler etc [1] Use of suitable scoring implement [1]</p> <p>Or</p> <p>Use of die cutter / perforations / pin wheel [1] description of pattern/template pressed into the cardboard [1]</p>	2	
A3(b)	PVA glue / hot glue gun / contact adhesive or AOVR	1	<p>Do not allow: glue sticks, superglue, wood glue, double sided tape Do not allow trade names</p>

Question	Answer	Marks	Guidance
B4(a)	<p>Front view: Left hand end outline correct to overlay [1] Corner edge correct to overlay [1] Right hand end identical to left hand end [1] Right hand end in correct position [1] Top back edge added to candidate solution [1]</p> <p>Bottom shelf (both lines 3 mm apart) in correct position [1] Top edge of shelf lip 10 mm above shelf [1] Top shelf (both lines 3 mm apart) in correct position [1] Top curved edge correct to overlay [1]</p> <p>Side view: Correct width and height [1] Corner added correctly projected from front view [1]</p> <p>Plan: 3 mm thickness and corner lines added to both sides [1] 3 mm thickness added to front and back [1]</p>	13	
B4(b)(i)	<p>Top back line correct to overlay [1] Right hand side lip identical to left hand [1] Baseline 52 mm wide [1] Baseline 24 mm below top line [1] Sides added to candidate solution [1]</p>	5	
B4(b)(ii)	<p>Polystyrene / acrylic / HIPS / polypropylene / polycarbonate / PVC / ABS</p> <p>Or AOVR</p>	1	Accept acronyms: PS, PP, PC
B4(c)(i)	<p>Any two from: Draw / insert: line / rectangle / shape/ arc / circle / text [1]</p>	2	Allow: Copy, paste, mirror/flip, trim or AOVR
B4(c)(ii)	<p>Outer lines and holes in one colour / line style (cut) [1] Text in different colour / line style (engrave) [1]</p>	2	Allow 1 mark for: Use of different colours [1] thick and thin lines [1]

Question	Answer	Marks	Guidance
B4(d)	High voltage / danger electricity [1] Laser radiation [1]	2	Answer must relate to electricity / voltage Must include the word 'radiation'

Question	Answer	Marks	Guidance
B5(a)	<p>Cooker upstand front / back correct to overlay [1] Cooker upstand top and side correct to candidate solution [1]</p> <p>Left side cupboard: Projected to correct width, depth and height (outline correct) [1] Top drawer correct size [1] Bottom drawer correct size [1] Top and bottom drawers correct position [1]</p> <p>Right side cupboard: Projected to correct width, depth and height (outline correct) [1] Door correct size [1] Door correct position [1]</p> <p>Sink correct size [1] Sink correct position [1] Sink correct depth [1]</p>	12	
B5(b)(i)	<p>Major axis 86, Minor axis 50 [1] Some construction shown [1] 4 to 8 more points plotted correctly [1] more than 8 points plotted correctly [1] Ellipse correct to overlay [1]</p>	5	<p>Accept different methods. If a trammel is used it must be attached to the paper.</p> <p>Do not award 4th mark if not attached.</p>
B5(b)(ii)	<p>Half ellipse matching candidate solution [1] 20 mm from existing [1]</p>	2	

Question	Answer	Marks	Guidance
B5(c)	Lines A, B to VP2 [1] Vertical end line C correct to overlay [1] Line 'D' projected to VP2 [1] Lines E and F projected from VP1 [1] Vertical back edge G correct to overlay [1] Bottom edge 'H' correct to candidate solution [1]	6	