



# Cambridge International AS & A Level

CANDIDATE NAME



CENTRE NUMBER

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## DESIGN & TECHNOLOGY

9705/11

Paper 1 AS Level Written Paper

October/November 2025

2 hours 15 minutes

You must answer on the question paper.

You will need: Standard drawing equipment  
Coloured pencils  
Calculator

### INSTRUCTIONS

- Answer **all** questions.
- Use a black or dark blue pen.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen or correction fluid.
- Do **not** write on any bar codes.
- You may use a pencil or coloured pencils for any sketches, drawings or rough working.

### INFORMATION

- The total mark for this paper is 100.
- The number of marks for each question or part question is shown in brackets [ ].
- All dimensions are in millimetres, unless otherwise stated.

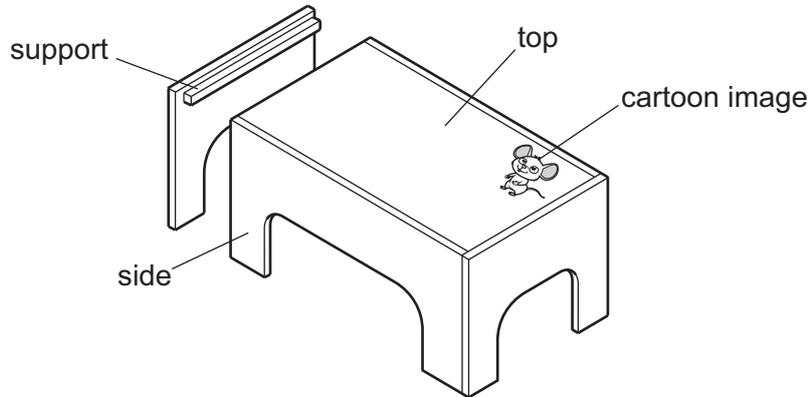
This document has **20** pages. Any blank pages are indicated.





Answer **all** questions.

1 Fig. 1.1 shows an exploded view of a child's table.



**Fig. 1.1**

(a) (i) Name **one** non-ferrous metal that could be used to make the supports for the top of the child's table.

..... [1]

(ii) Name **one** composite material that could be used to make the sides of the child's table.

..... [1]

(iii) Describe **one** property of polycarbonate that makes it suitable for the top of the child's table.

.....  
.....  
..... [2]

(b) (i) Describe **one** method of adding the cartoon image to the child's table.

.....  
.....  
..... [2]

(ii) Explain why the cartoon image would be added to the child's table.

.....  
.....  
..... [2]





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2 Designers use different graphical techniques to communicate design proposals.

(a) (i) Identify the enhancement technique shown in Fig. 2.1.

..... [1]

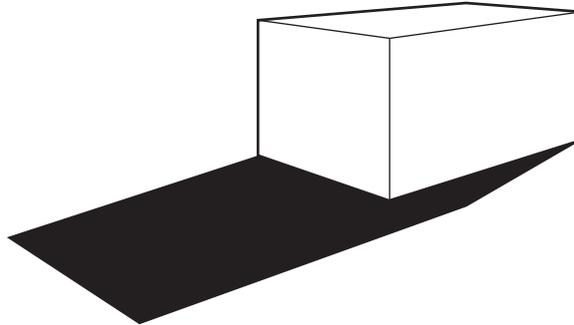


Fig. 2.1

(ii) Name **one** other enhancement technique that could be used by a designer.

Explain why this enhancement technique would be used by a designer.

enhancement technique .....

explanation .....

.....  
.....  
.....

[3]

(b) Explain **two** advantages for designers of using orthographic working drawings to show a final design proposal to a manufacturer.

1 .....

2 .....

[4]



3 Fig. 3.1 shows details of a display stand that will be used in a shop.

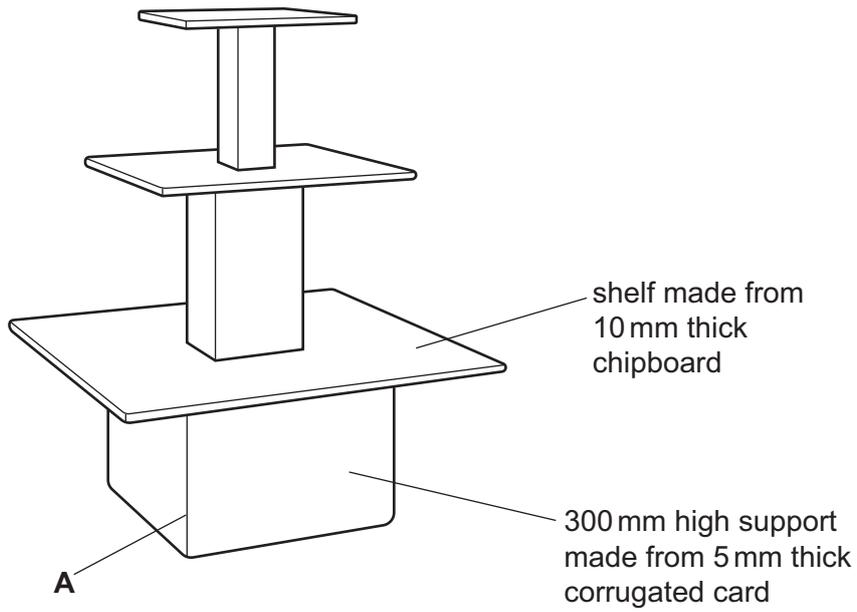


Fig. 3.1

(a) Explain **two** reasons why the display stand is designed to be assembled in the shop.

1 .....

.....

.....

.....

.....

2 .....

.....

.....

.....

[4]





(b) Use sketches and notes to show:

(i) a temporary method of joining the corrugated card support at **A**

[4]

(ii) a temporary method of attaching the chipboard shelf to the corrugated card support.

[4]



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(c) Describe **two** safe working practices that should be followed when cutting corrugated card with a craft knife.

1 .....

2 .....

[4]

(d) Identify a suitable finish for the top and edges of the chipboard shelf. Justify your choice of finish.

finish .....

justification .....

[4]

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**Question 4 starts on page 8.**





4 Fig. 4.1 shows details of an adjustable shoe rack.

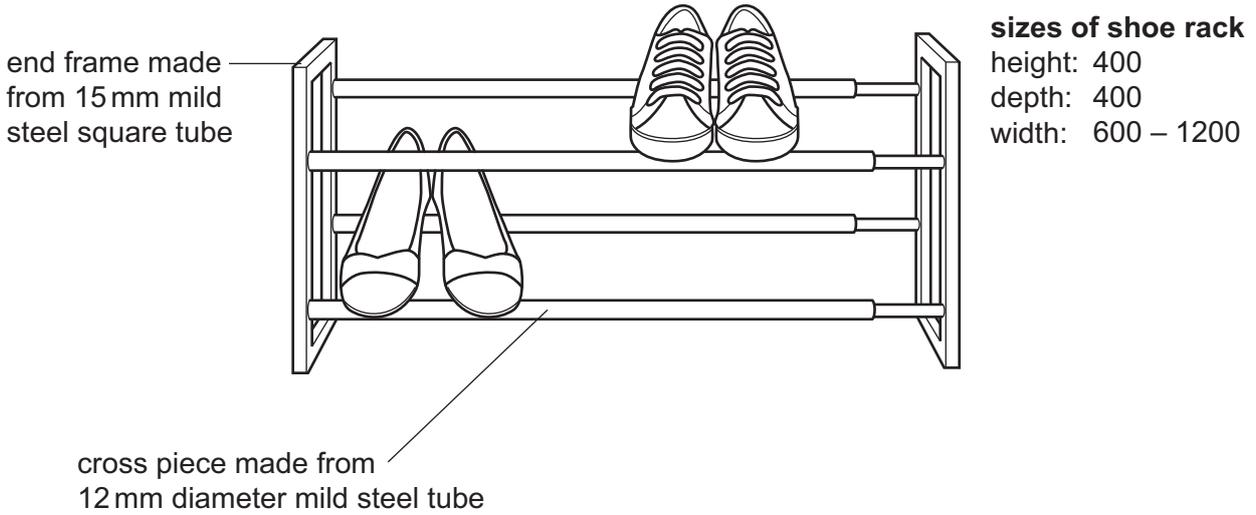


Fig. 4.1

(a) Give **two** reasons why the shoe rack has been designed so that the width is adjustable.

1 .....

.....

.....

.....

2 .....

.....

.....

.....

[2]

(b) Explain **one** reason why a finish would be applied to the mild steel end frame of the shoe rack.

.....

.....

.....

.....

[2]

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(c) (i) Use sketches and notes to describe a method of making **one** end frame for the shoe rack.

In your response, you should give details of any tools, equipment and processes involved and the safety precautions undertaken.

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- (ii) Use sketches and notes to describe a temporary method of joining the shoe rack cross piece to the end frame.

In your response, you should give details of any tools, equipment and processes involved and the safety precautions undertaken.

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**Question 5 starts on page 12.**



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5 Fig. 5.1 shows a vending machine.

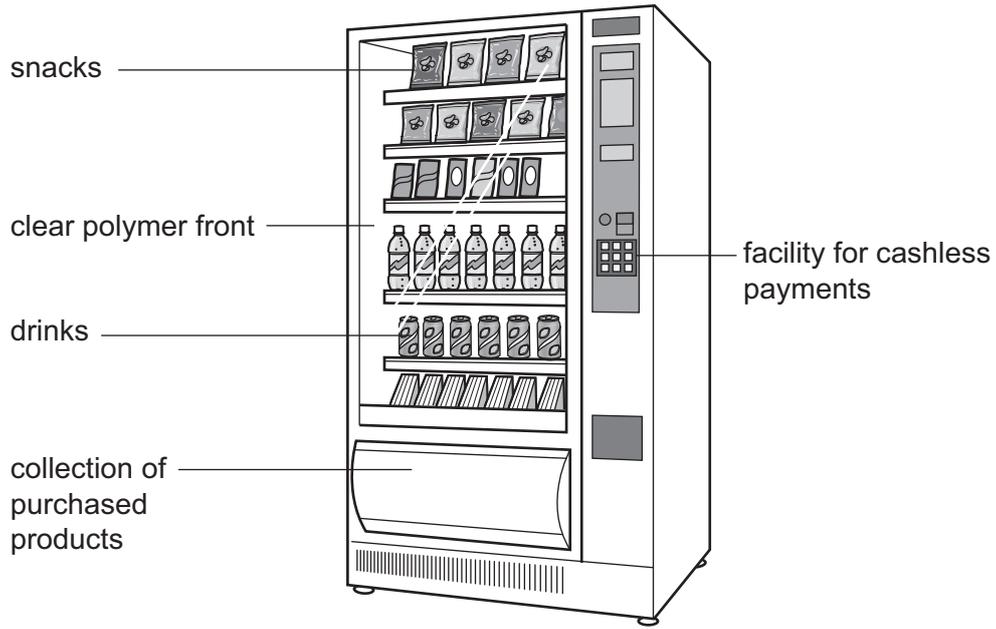


Fig. 5.1

(a) Explain why the vending machine:

(i) is often positioned outside a shop

.....  
 .....  
 ..... [2]

(ii) has a facility for cashless payments

.....  
 .....  
 ..... [2]

(iii) has a front that is made from a clear polymer.

.....  
 .....  
 ..... [2]



(b) Fig. 5.2 shows the mechanism that is used to dispense packets of snacks from the vending machine.

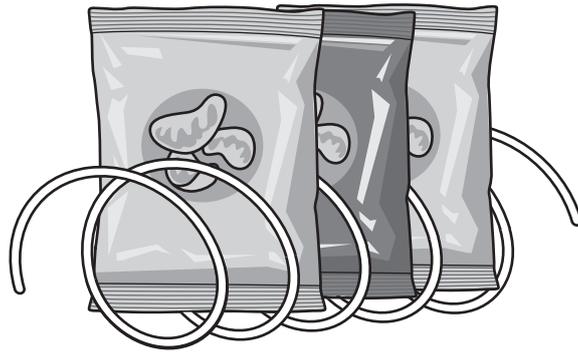


Fig. 5.2

(i) Explain the operation of the mechanism shown in Fig. 5.2 as it dispenses packets of snacks. Use technical terms in your response.

.....

.....

.....

..... [2]

(ii) Use a sketch and notes to show an alternative mechanism that could dispense cans of drink from the vending machine.

[2]



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(c) Fig. 5.3 shows a recycling unit containing three bins. The unit could be positioned by the vending machine.

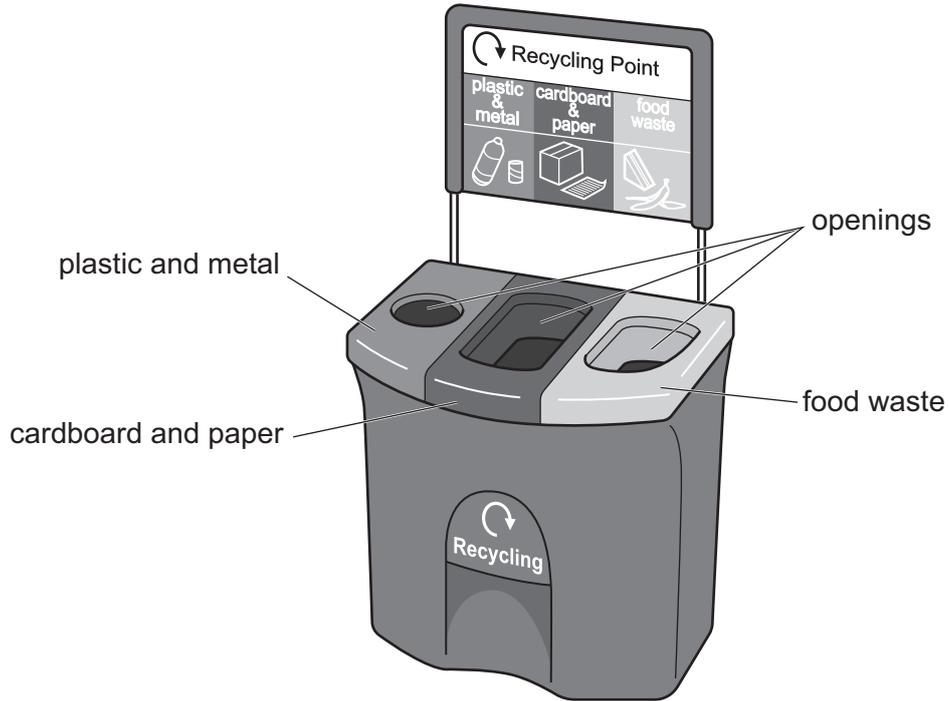


Fig. 5.3

Use sketches and notes to show how the following have been considered in the design of the recycling unit:

- (i) the shape of the openings

[3]





(ii) colour.

[3]

(d) Describe **two** ways in which the designer of the recycling unit has considered the needs of different groups of people.

1 .....

.....

.....

.....

2 .....

.....

.....

.....

[4]



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6 Fig. 6.1 shows a device that plugs into a phone and flashes when the phone rings. The device allows a person with a hearing impairment to know that there is an incoming call.

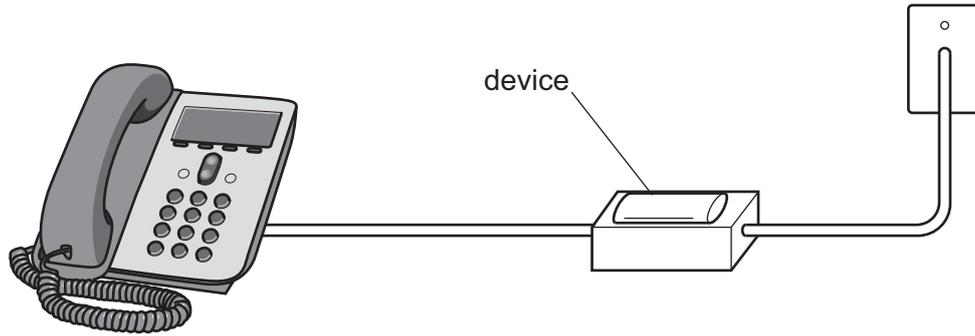


Fig. 6.1

Use sketches and notes to show how the design of **one other product** could be modified to be more inclusive, allowing it to be used by a person with a hearing impairment.

Your answer should:

- identify the product you propose to modify
- use sketches and notes, including appropriate conventions and specialist vocabulary, to show how you propose to modify the product to be more inclusive
- include an analysis of how the modification meets the needs of a person with a hearing impairment.

You may use the space on the next page for more sketches.



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