

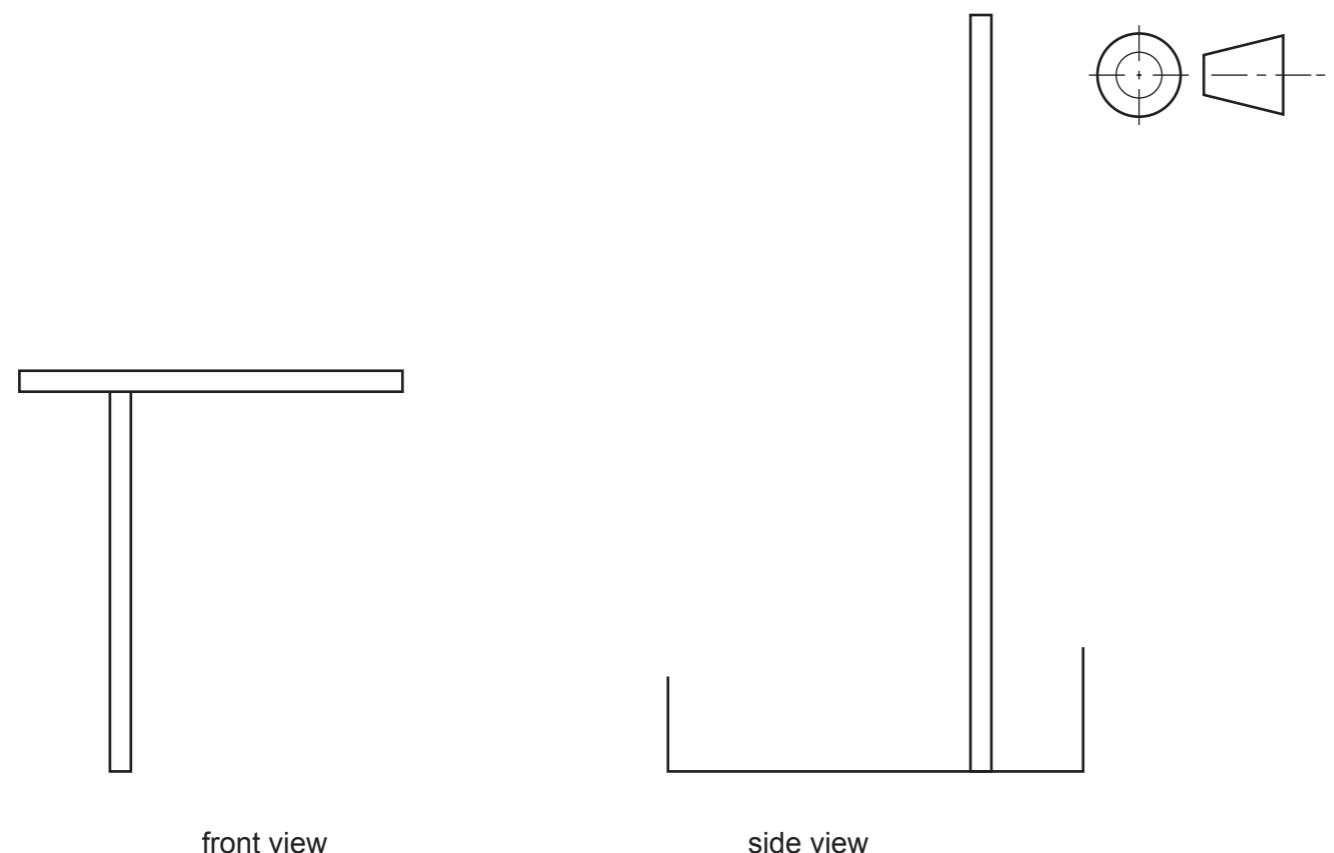
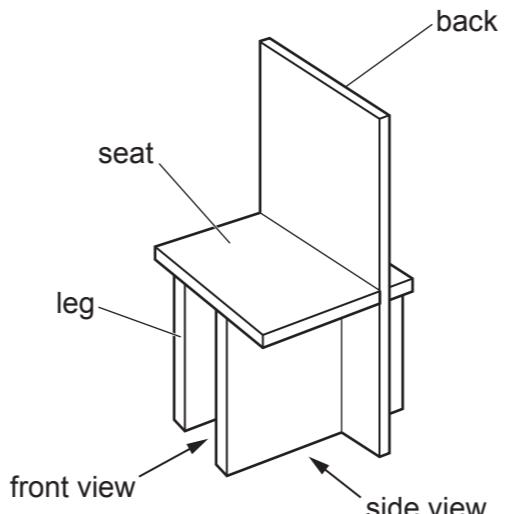
Section A

Answer Question A1.

A1 A model of a chair is shown to the right.

(a) Complete the full-size orthographic views of the model of the chair below by adding:

(i) the missing parts of the front and side views [7]
 (ii) two dimensions. [3]



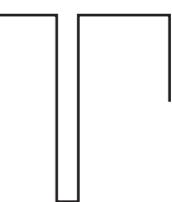
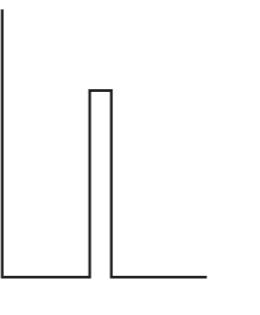
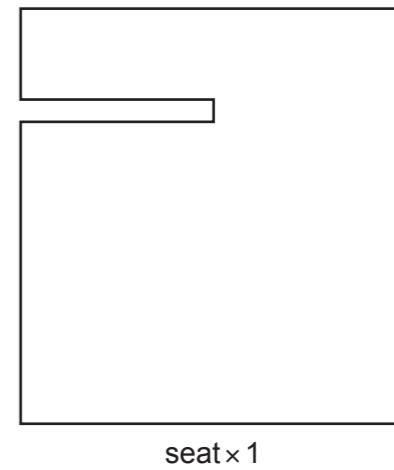
(b) Explain **one** reason for making a model of a chair before the design is finalised.

.....

 [2]

(c) The model of the chair is made from four pieces of foamboard that slot together.

(i) Complete the full-size drawings below to show the shapes of the back, seat and one of the legs required to make the model of the chair. [6]



(ii) Complete the list to show **three** pieces of equipment that would be used when cutting the foamboard.

1. Craft knife
 2.
 3. [2]

For Examiner's use	
A	
B	
B	
Total	

(d) Complete the flowchart to show how to assemble the model of the chair.

[6]

(e) (i) Give **two** reasons why flowcharts are used to show how to assemble products.

1.

2.

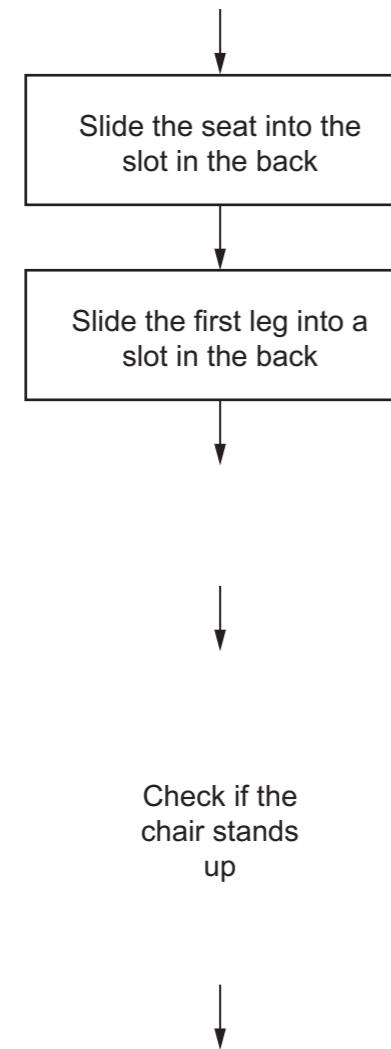
[2]

(ii) Explain **one** reason why assembly instructions are usually printed in monochrome.

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.....

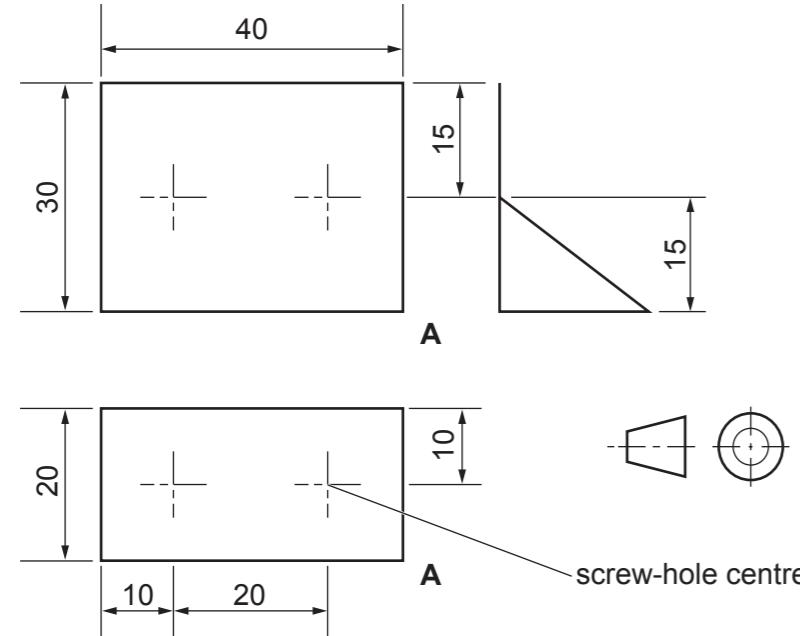
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Section B

Answer **two** questions from this section.

B2 (a) Full-size orthographic views of a metal corner plate used in furniture construction are shown below. The thickness of the material is not shown.



(i) Complete the full-size development (net) of the metal corner plate.
Include the screw-hole centres. [6]



development (net)

(ii) Complete the full-size isometric view of the metal corner plate from the given start point **A**.
Do **not** show the material thickness. [6]



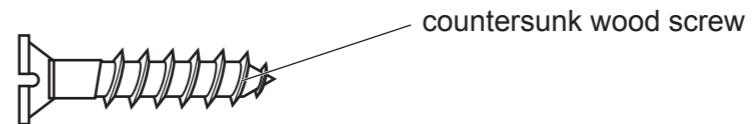
isometric

(iii) Give **two** reasons why rendering would be added to the isometric view of the metal corner plate.

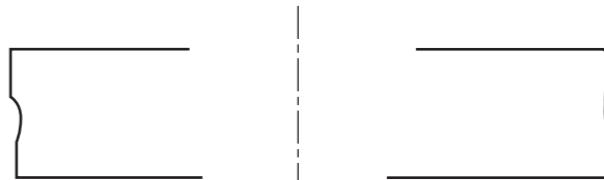
1.
2.

[2]

(b) Countersunk wood screws are to be used to fasten the metal corner plate in position.



Complete the scale 4:1 **sectional view** by adding a Ø4 mm countersunk hole to the plate. [4]



sectional view of plate

(c) In the space below, sketch an exploded view to show how the metal corner plate and four screws would be used to hold a shelf in position in a piece of furniture. [7]



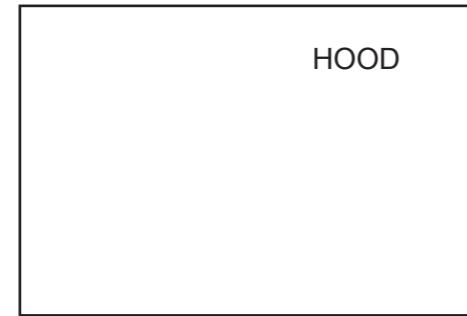
B3 A furniture manufacturer called HOOD produces leaflets on the products that it produces.

(a) A scale 1 : 5 drawing of the A4-size development (net) required to make an A5 folded leaflet is shown below. Complete the drawing by:

(i) adding the fold line

[2]

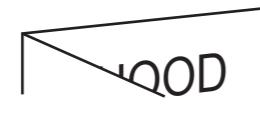
(ii) adding a cut-out window that allows the word 'HOOD' to be seen when the leaflet is folded in half.



inside of leaflet

(b) Complete the three-dimensional (3D) sketch of the partly folded leaflet.

[4]



(c) Complete the table to show the manufacturing specification for the leaflet.

[5]

Size of paper required	A4 (297 mm × 210 mm)
Finished size of leaflet	A5 (210 mm × 148 mm)
Weight of paper	80 gsm
Quantity	50 000
Printing method	
Method of cutting the window	

(d) Two alternative designs for leaflets made from A3 paper are shown.

Complete the table to show the unfolded sheets of A3 paper required to make leaflet **A** and leaflet **B**. [8]

	folded sheet	unfolded sheet
leaflet A		
leaflet B		

(e) Explain **two** reasons why the furniture manufacturer might decide to move to electronic leaflets rather than paper leaflets.

1.

....

....

2.

....

....

[4]

B4 A furniture manufacturer called HOOD produces an annual report to show sales throughout the world.

(a) On the centre lines below, construct an ellipse around the map of the world with major axis 180 mm and minor axis 100 mm. [6]



(c) Cardboard is used to package flat-pack furniture. Explain **one** benefit and **one** drawback of using cardboard in packaging.

benefit:

.....

drawback:

.....

[4]

(d) Use sketches and notes to describe **one** method by which cardboard can be formed to increase its strength when used in packaging. [3]

(b) Use sketches and notes to show **one** way the word HOOD could be modified to show the manufacturer produces flat-pack furniture. [4]

(e) Give **three** methods of gathering information about the sales of furniture.

1.

2.

3.

[3]

(f) Use the information below to construct a pie chart showing the sales of furniture on different continents. Show the sector for Africa as exploded from the main body of the pie chart. Use colours and labels to enhance the pie chart. [5]

Continent	Sales	Continent	Sales	Continent	Sales
Africa	45k	Australia	60k	North America	30k
Asia	90k	Europe	75k	South America	60k



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