

Section A

Answer **all** questions in this section.

A1 On the right is shown an isometric pictorial drawing of an octagonal pencil holder. These pencil holders are placed in all the guests' bedrooms in a hotel.

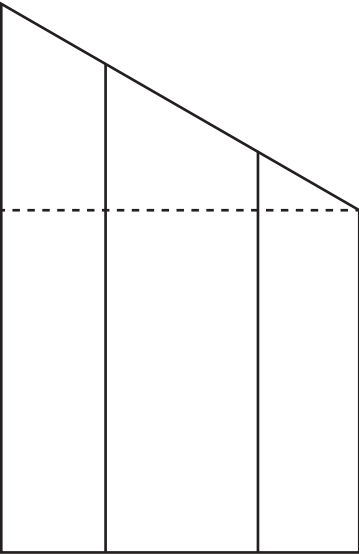
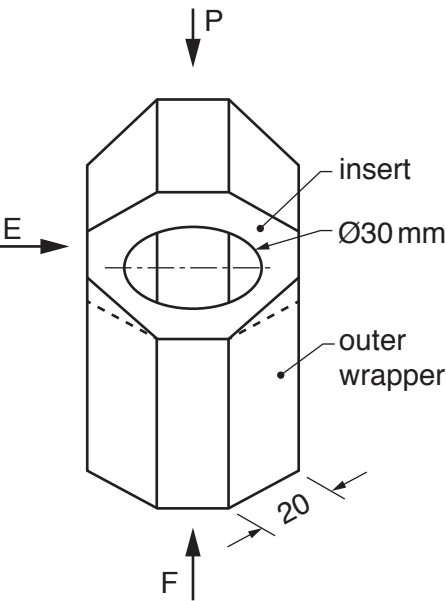
The outer wrapper and the insert of the pencil holder are printed onto two pieces of card.

These are sent out 'flat packed' to customers. (Note the pencil holder does **not** have a bottom.)

(a) In the space below, complete the following 'first angle' **orthographic views** of the pencil holder. (The **end view** has been completed for you.)

(i) A **front view** in direction of arrow 'F'. [6]

(ii) A **plan** in direction of arrow 'P'. [5]



Front view

End view

Plan

Scale 1:1

7048/01 October/November 2019 **2 hours 30 minutes**
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Centre Number

Candidate Number

Candidate Surname

Other Names

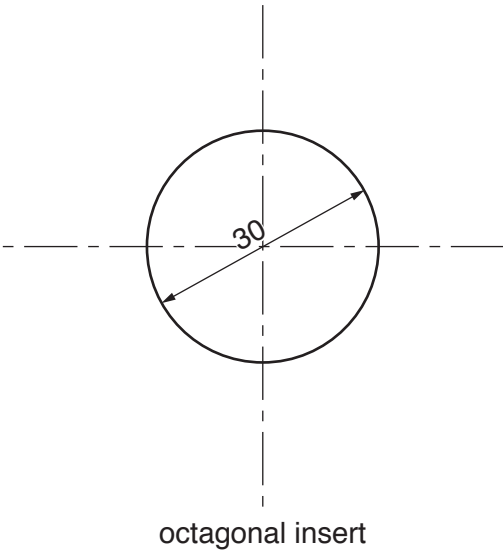
[Turn over]

(b) In the space below, draw a full size **development (net)** of the pencil holder outer wrapper.
Use the correct convention for fold lines, cut lines and a glue tab. [9]

(c) In order for the pencil holder to keep its shape an octagonal insert is fitted. Complete the drawing of the insert by adding:

(i) the octagon [3]

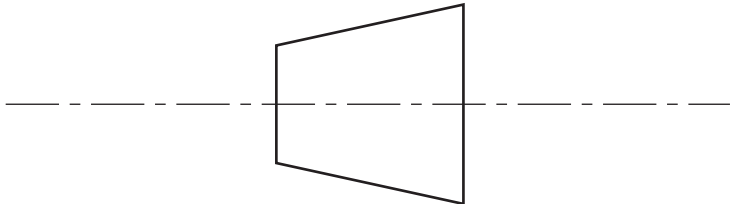
(ii) suitable glue tabs. [2]



(d) As the pencil holders have to be assembled by the customer, glue has been found to be too messy.
Name an alternative method of joining that could be used.

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

(e) Complete the symbol for **First Angle Projection**. [3]

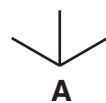
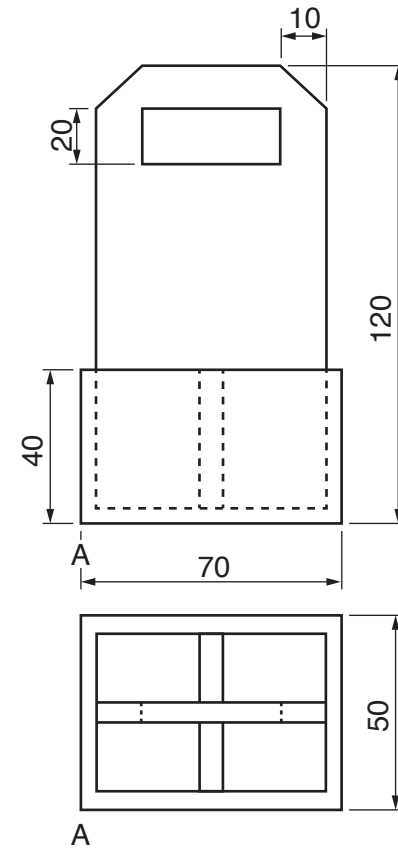


For Examiner's use	
A	
B	
B	
Total	

Section B

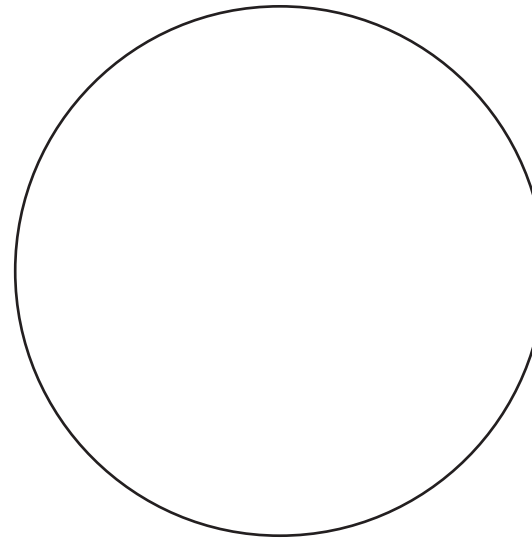
Answer any **two** questions from this section.

- B2 (a)** The orthographic drawing on the right shows a container to hold four sauce bottles, to be placed on restaurant tables.
On the isometric axes below, complete a full size isometric drawing of the container with the corner 'A' on the given point 'A'.
The thickness of the material is 5 mm. [9]

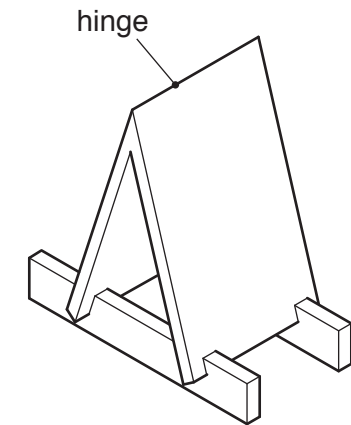


- (b)** A survey of the cars sold at a garage over a twelve month period showed that the most popular colours were:
White – 90, Black – 75, Grey – 60, Blue – 60, Red – 45 and Silver – 30.

- (i)** On the circle below, construct a **pie chart** to display this information. [4]
(ii) Add a suitable key to your solution. [2]



- (c)** The drawing on the right shows an advertising board to be made from three pieces of **'foam board'**.



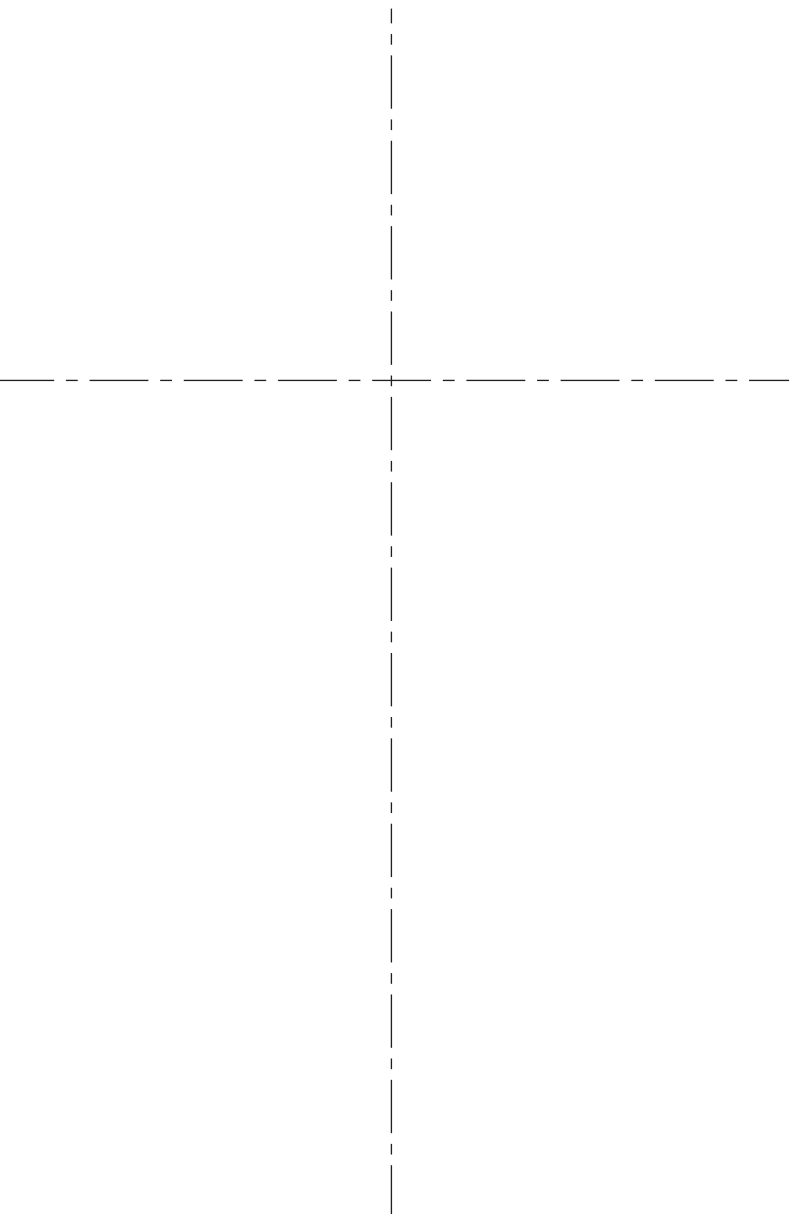
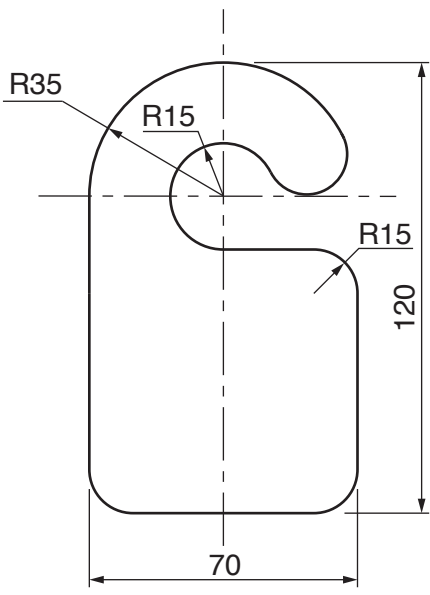
- (i)** In the space below, draw a cross section through a piece of 'foam board' to show its construction. [2]

- (ii)** The faces of the advertising board are to be made from one piece of foam board with a hinge in the centre.
In the space below, show how a piece of foam board could be cut to make the required hinge. [4]

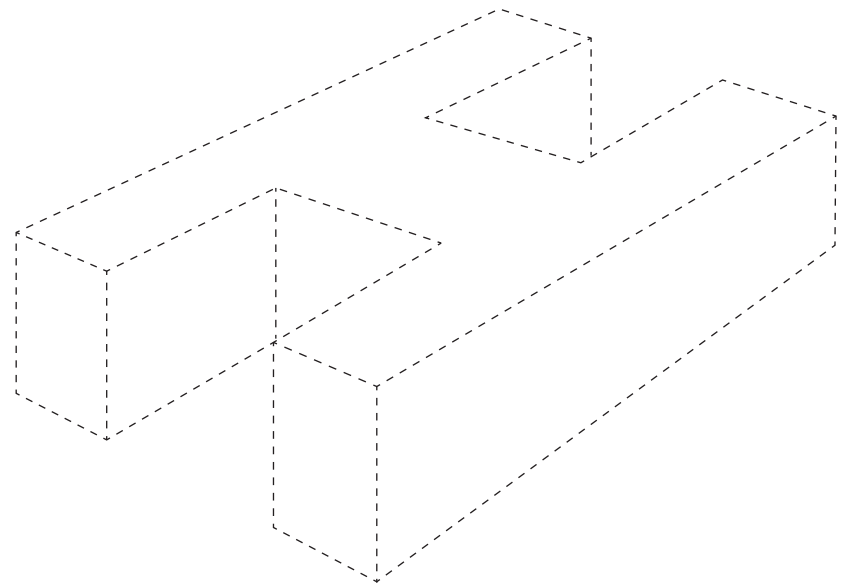
- (iii)** Complete the list below by adding the names of four tools used to mark out and cut out the foam board. [4]

- 1
2
3 Cutting mat.....
4
5

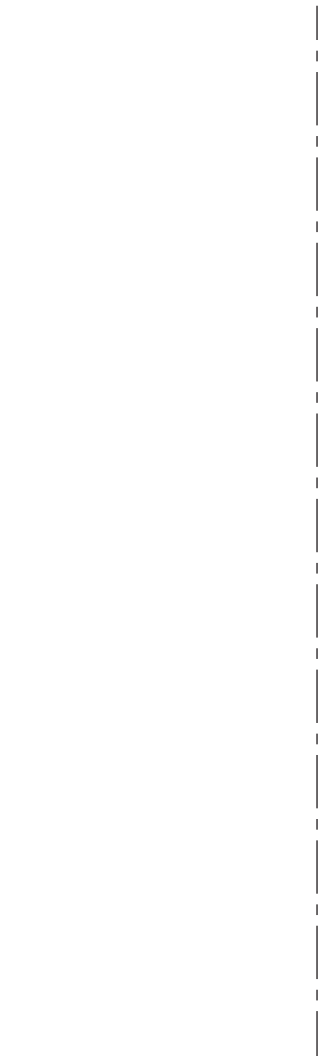
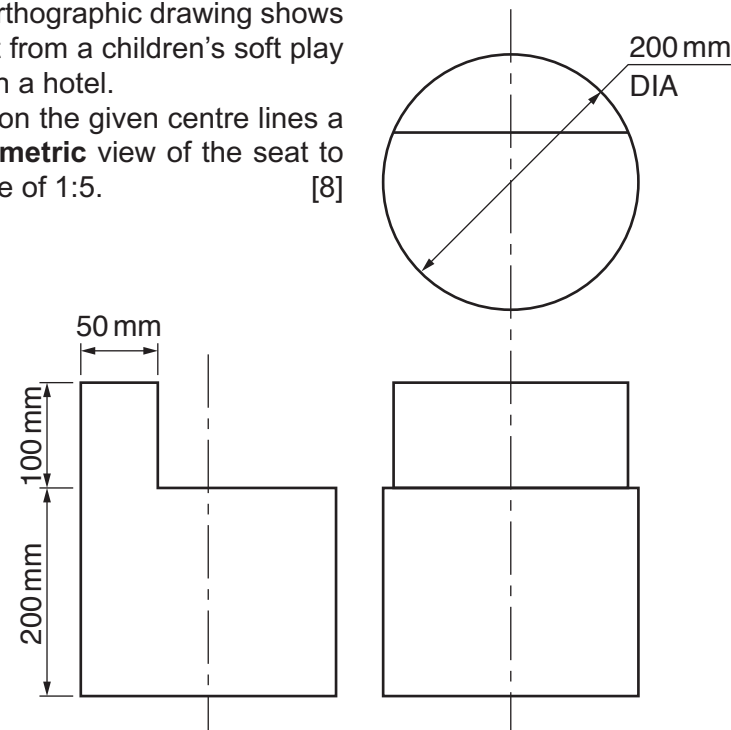
B3 (a) The drawing on the right shows the outline of a sign to be hung on a hotel door. Using the given centre lines, construct a full size drawing of the sign. [9]



(b) The freehand drawing below shows the letter 'H' from a hotel sign. The letter is made from Acrylic (Perspex).
(i) Enhance the drawing by using the 'thick and thin' line technique. [4]
(ii) Render the drawing to show that it is made from a shiny (reflective) material. [4]



(c) The orthographic drawing shows a seat from a children's soft play area in a hotel. Draw on the given centre lines a **planometric** view of the seat to a scale of 1:5. [8]

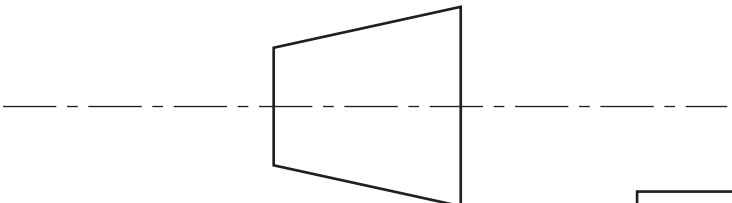
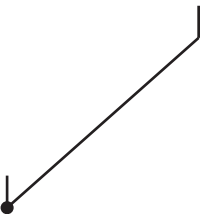
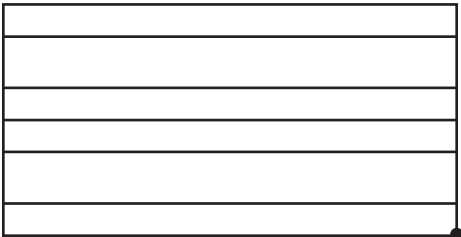


B4 (a) The third angle orthographic drawing on the right shows a chocolate bar provided for hotel guests.

- (i) Below, complete the estimated two point perspective drawing of the chocolate bar using the given front corner shown with bold 'dot' . [10]
- (ii) Complete the symbol for third angle projection. [3]

VP₁
+

VP₂
+



Symbol for third angle projection.

(b) The number of guests staying at the hotel is:

**Monday: 60, Tuesday: 65, Wednesday: 70,
Thursday: 60, Friday: 45, Saturday: 30 and Sunday: 30.**

- (i) In the space below, construct a **3D Bar-chart** to display the information. [4]
- (ii) Use shading or colour to enhance your drawing. [2]

(c) In order to prevent the loss of keys the hotel attaches an elliptical tag to each key. On the given centre lines, construct an ellipse with a major axis of 140 mm and a minor axis of 80 mm. Do **not** draw the keyring or key. [6]

