

SECTION 1: Answer one question from this section.

Question 1

The sketch on the right shows a display stand for a holiday company called 'Sun King'. The display stand consists of a folded support, three shelves and an information board.

(a) Complete the parts list below for the information board and the shelves. [3]

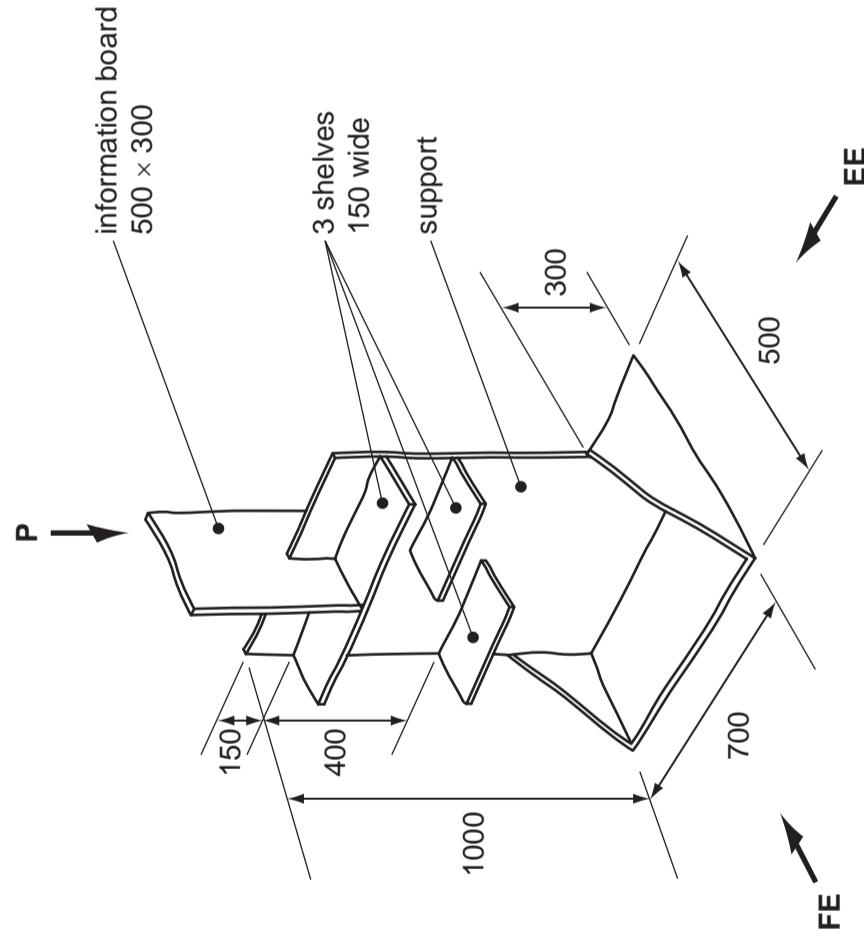
	Length	Width	Thick.	Number
Information board		300	20	1
Top shelf		150	20	1
Lower shelves	350	150	20	20

(b) In the space below, draw the following orthographic views of the fully assembled display stand to a scale 1:10. [6]

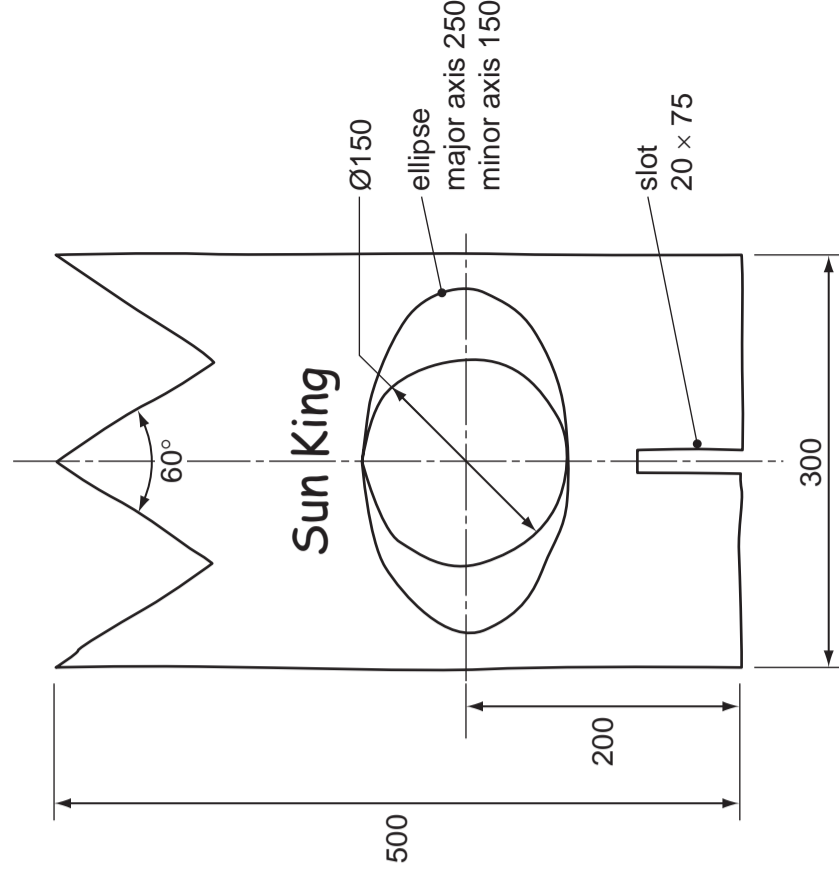
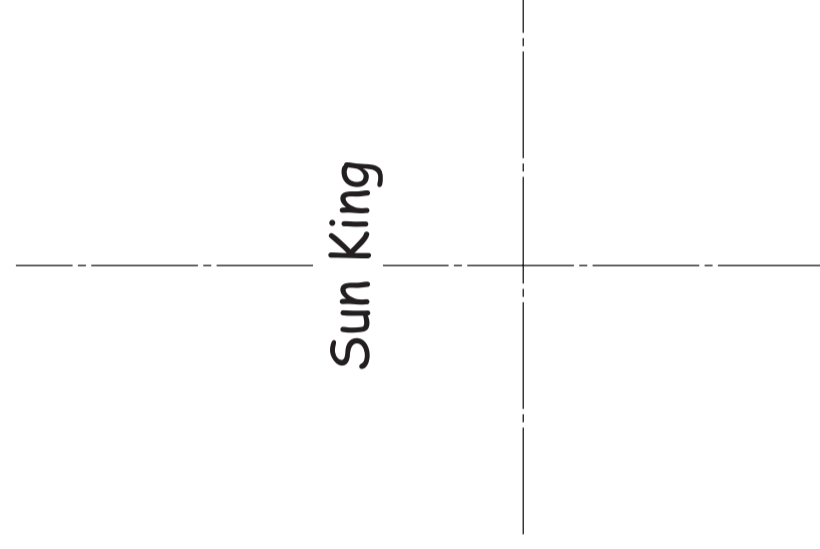
1 A view in the direction of **FE**. [5]

2 A view in the direction of **EE**. [4]

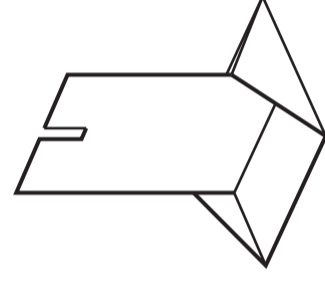
3 A plan in the direction of **P**.



(c) The design for the information board is shown on the right. Complete the drawing of the information board on the centre lines below to a scale of 1:5. [7]



(d) The support, shown below, is made from a one-piece development (net) cut and folded from a single sheet of foam board. [3]



(i) In the space below draw a sectional view to show a method of cutting the foam board so that it can be folded easily. [2]

(ii) In the space below, sketch a design for the one-piece development (net) for the support. Include fold lines and glue tabs. [3]

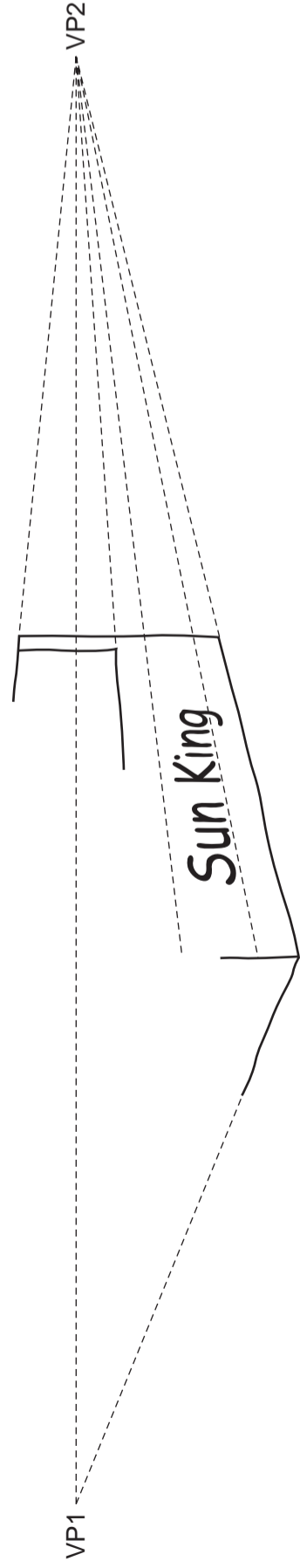
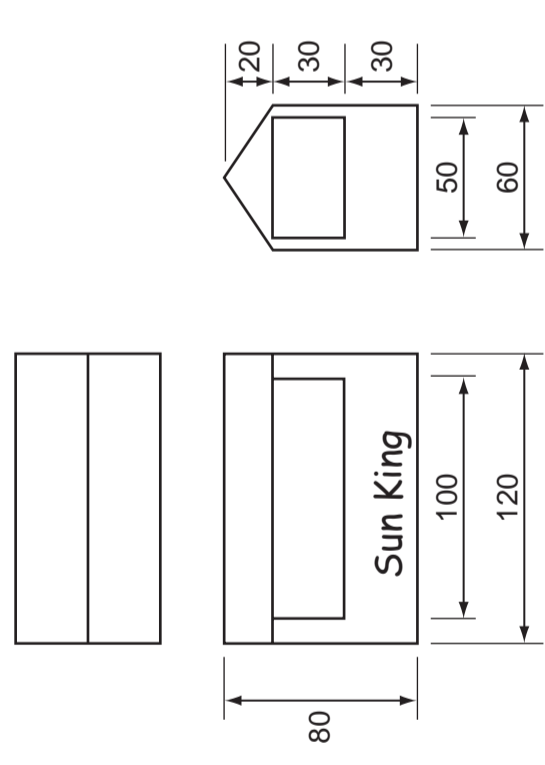


[Turn over

Question 2

Orthographic views of a model of an exhibition stand for a holiday company called 'Sun King' are shown on the right.

(a) Complete the **estimated** two-point perspective drawing of the exhibition stand in the space below. [8]



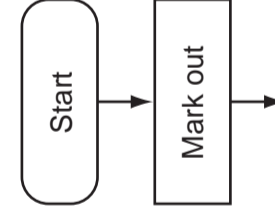
The model of the exhibition stand is to be made from cardboard.

In the space below, sketch the one-piece development (net) required to make the exhibition stand. Include fold lines and glue tabs. [5]

(c) The stages required to make the model of the exhibition stand are shown below.

- Score the fold lines.
- Cut out the development (net) with a craft knife.
- Glue development (net) together.
- Mark out development (net) on card.
- Fold to shape.

Complete the flow chart below to show the stages in the correct order required to make the model of the exhibition stand. [5]

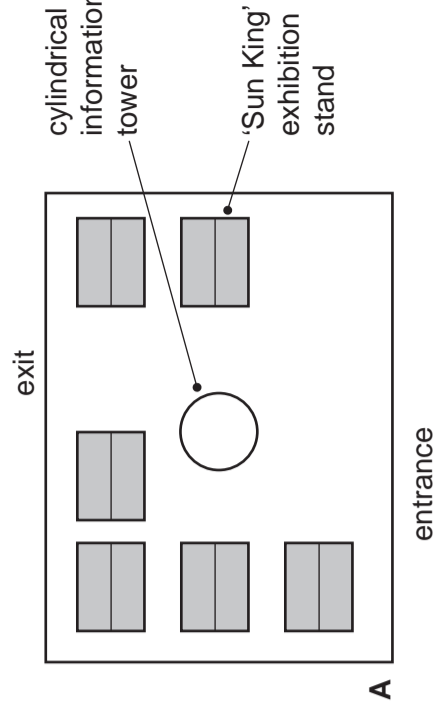


(d) A plan view of an exhibition hall, showing the position of the 'Sun King' stand, is shown on the right. All the exhibition stands and the information tower are the same height.

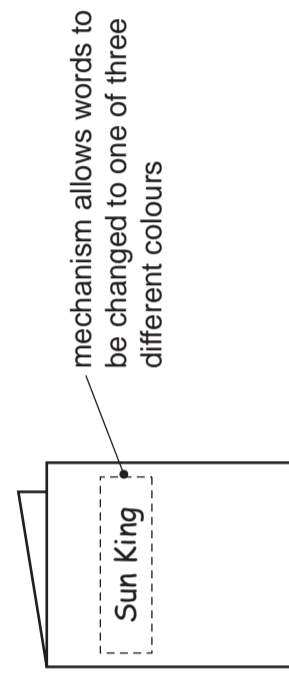
From the given start point A, draw a three-dimensional **planometric** view of the layout for the exhibition hall that includes:

- the six exhibition stands;
- the information tower;
- the position of the 'Sun King' stand;
- the entrance;
- the exit.

Estimate **all** dimensions. [8]



(e) During the exhibition, 'Sun King' give away a brochure to customers. The brochure includes a **mechanism** that allows the words 'Sun King' to be changed so that it can appear in each of three different colours.



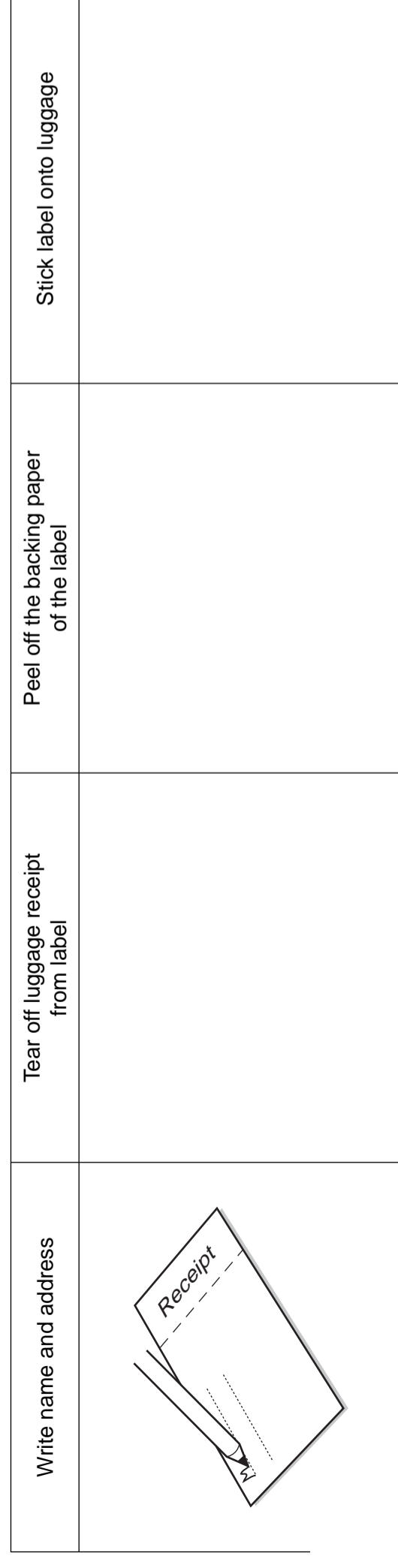
In the space on the right, use sketches and notes to show an idea for the **mechanism** that will allow the words 'Sun King' to be changed to one of three different colours. [4]

SECTION 2: Answer **two** questions from this section.

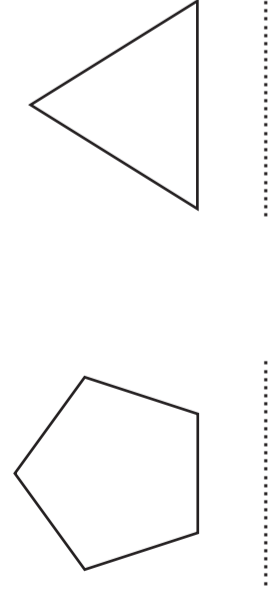
Question 3

The holiday company 'Sun King' gives luggage labels to customers.

- (a) Add sketches to complete the process diagram below to show how to use a **self-adhesive** luggage label. [6]

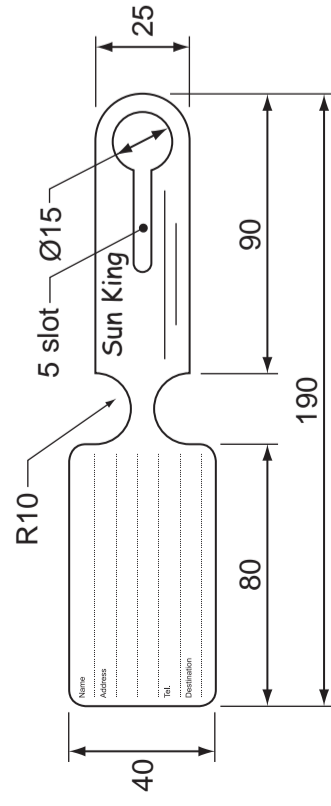


Name the **two** geometrical shapes below that are used for luggage labels and draw the **two** missing label shapes. [6]



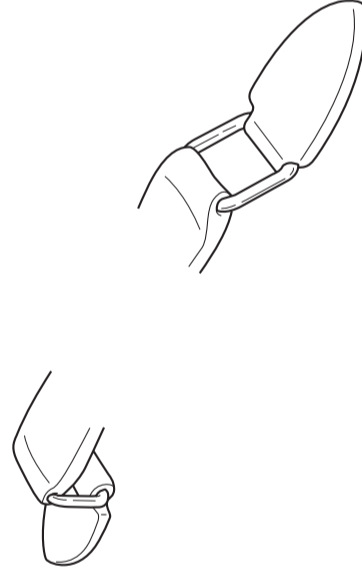
..... Regular octagon Rhombus

The outline shape of a wrap-around luggage label is shown below.



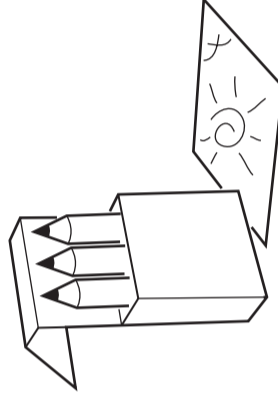
- (b) In the space below, draw the luggage label full size. Do **not** include any surface graphics. Estimate any dimensions not given. [9]

- (ii) Make a three-dimensional sketch of the luggage label attached to the luggage handle below. [4]



Question 4

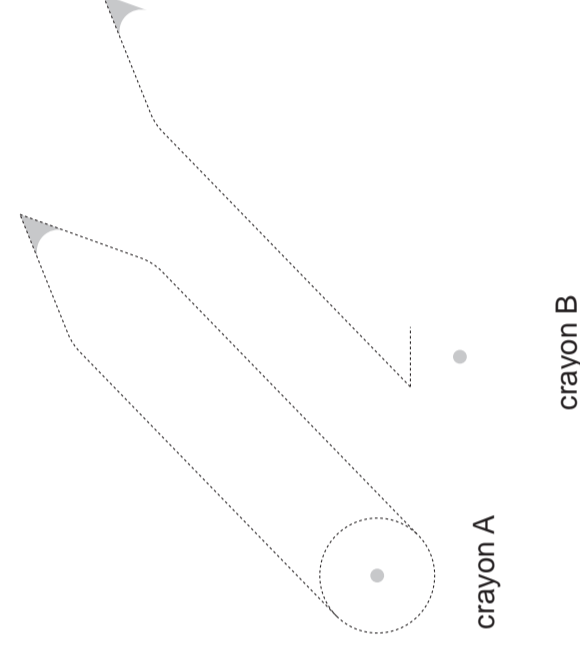
The holiday company 'Sun King' gives away colouring packs to children.



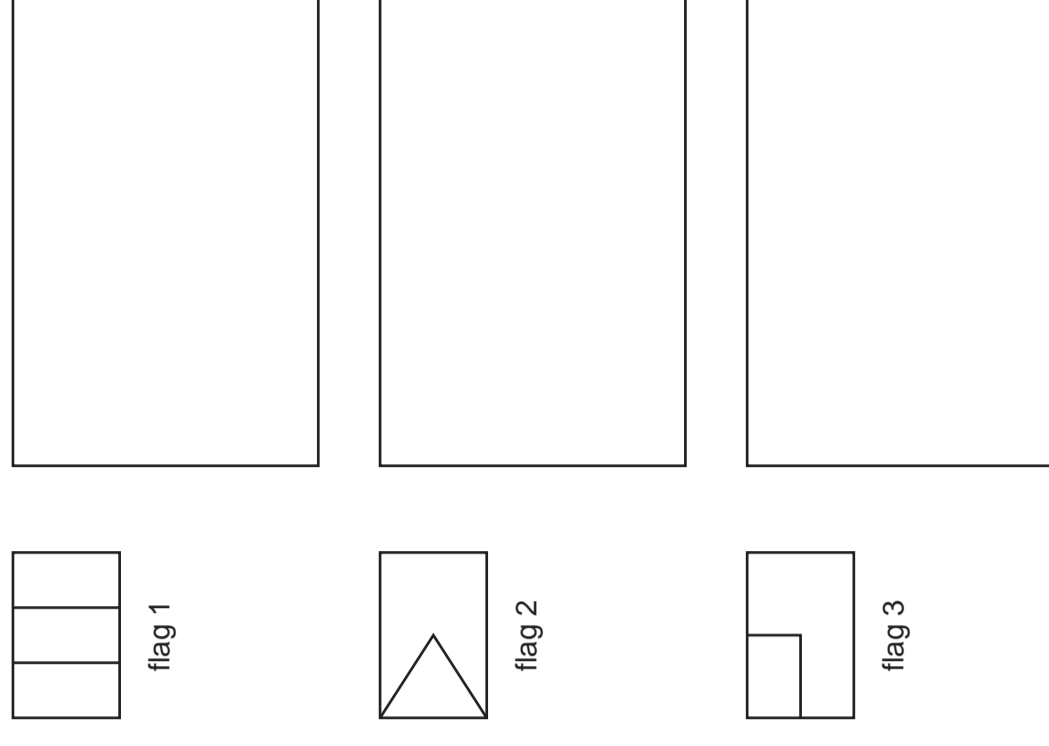
- (a) Complete the oblique drawings below by:

- (i) rendering crayon A to enhance the round appearance; [2]

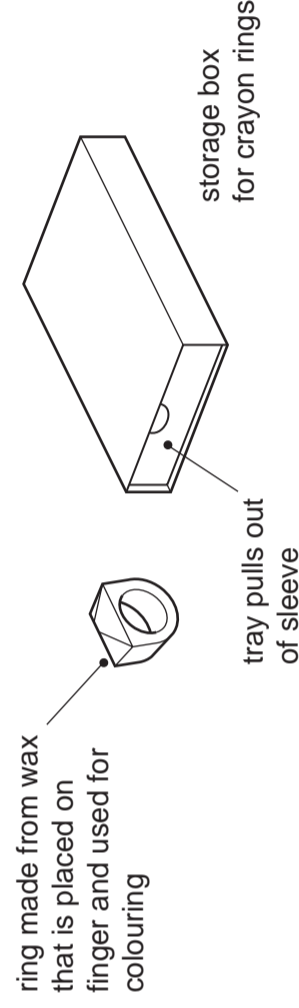
- (ii) making crayon B hexagonal in shape. [4]



- (b) Three drawings from a colouring sheet show the outline shapes of flags. Accurately **construct** the three flags in the large rectangles provided. [6]

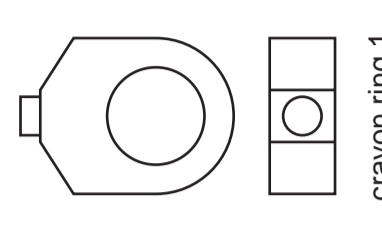
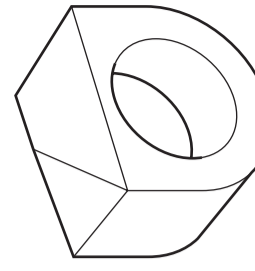



- (c) As part of a new promotion, crayon rings are to be given to children. The crayon rings are stored in the package shown below.



- (i) In the space below, sketch a three-dimensional view of an empty storage box with the tray pulled half way out of the sleeve. [5]

- (ii) In the spaces below, add the missing drawings of the **two** crayon rings [8]

orthographic views	three-dimensional view
	
crayon ring 1	
orthographic views	three-dimensional view
	
	crayon ring 2

[Turn over



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
General Certificate of Education Ordinary Level

CDT: DESIGN AND COMMUNICATION
Paper 1

No Additional Materials are required
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October/November 2012
2 hours 30 minutes
plus 15 minutes reading time
IB12 11_7048_01/4RP

SHEET 2 OF 2 (SECTION 2)
Write your surname, other names, Centre number and candidate number in the spaces provided.

Answer **one** question only from Section 1 (Questions 1 and 2).

Answer **two** questions only from Section 2 (Questions 3 to 6).

Answer the questions in the spaces provided.

All construction and projection lines must be clearly shown.

All dimensions are in millimetres unless otherwise stated.

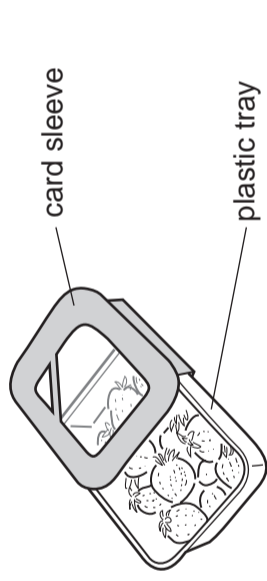
The number of marks is given in brackets [] at the end of each question or part question.

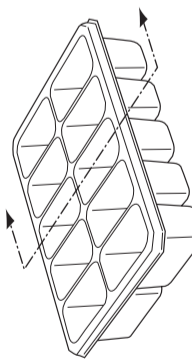
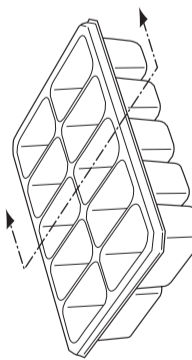
Candidate Surname
Other Names
Centre Number
Candidate Number

Question 5

The holiday company 'Sun King' gives packages of fruit to customers to eat whilst they are travelling. The packages consist of a plastic vacuum-formed tray and a card sleeve.

- (a) In the spaces below:
- (i) Sketch a sectional view through plastic trays X and Y. Ignore the thickness of the plastic; [3]
 - (ii) Sketch a 3D view of tray Z. [3]

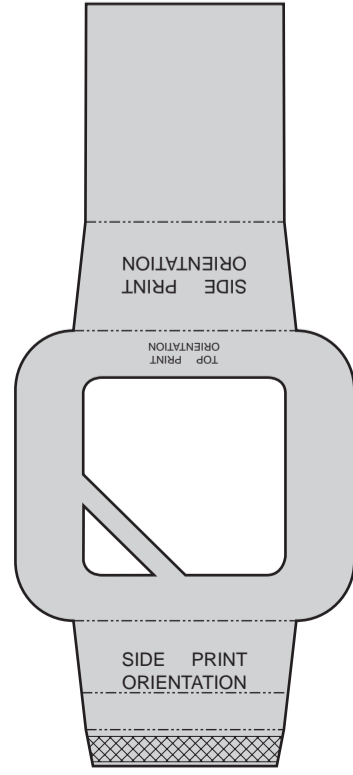


	Tray Y	Tray Z
sectional view		

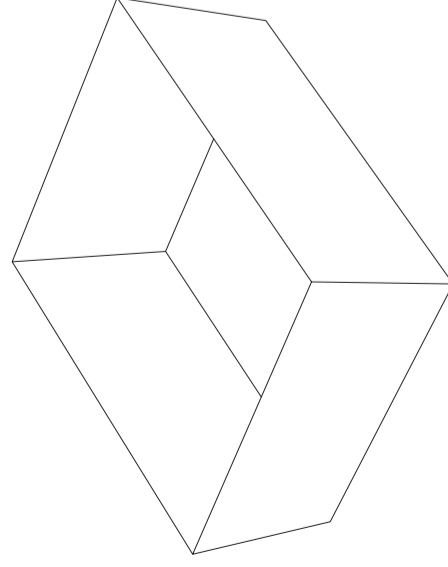
Tick (✓) to indicate whether the following specification points for the trays are true or false. [6]

Specification	True	False
1. The trays are vacuum-formed.	✓	
2. The plastic trays are made from a thermoplastic.		
3. The plastic trays are produced in large quantity.		
4. The plastic trays are transparent so that the fruit can be seen.		
5. The plastic trays have a rim around the top to reduce the strength.		
6. The plastic trays are squashed before the material is recycled.		
7. The plastic trays have sloping sides to reduce the weight of the tray.		

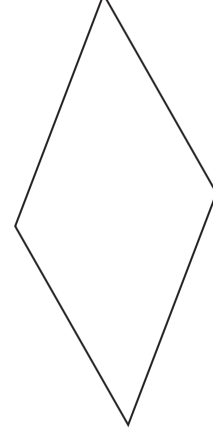
The drawing of the development (net) for the card sleeve for a fruit package is shown below.




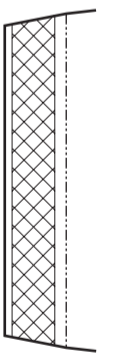
Sketch the fully assembled card sleeve on the outline of the plastic tray shown below. [7]



(ii) The window in the card sleeve is made from clear plastic sheet. Render the panel below to make it appear like clear plastic sheet. [3]



(iii) State what is meant by the following features on the development (net) of the card sleeve. [3]

Feature	Meaning
SIDE PRINT ORIENTATION



Question 6

The holiday company 'Sun King' uses visual charts to show information about holidays.

- (a) In the space below, draw a **bar chart** to show the most popular holiday destinations. Label each bar. [4]

	1000 of people
Africa	60
Australia	50
Asia	20
Europe	80



bar chart

- (b) In the space below, draw a **pie chart** to show the ways people travel on holiday. Use colour and labels to identify each sector. [6]

	1000 of people
Train	15
Aeroplane	90
Bus	30
Boat	45

pie chart

- (c) A silhouette is to be used to represent each method of travel. Complete the table below to show the **two** missing silhouettes. [4]

Train	
Aeroplane	
Bus	
Boat	

(d) Orthographic views of a pie chart are shown on the right. On the centre lines below, accurately draw a full-size three-dimensional isometric view of the pie chart with the sector 'exploded'. Do **not** add colour to your drawing. [11]

