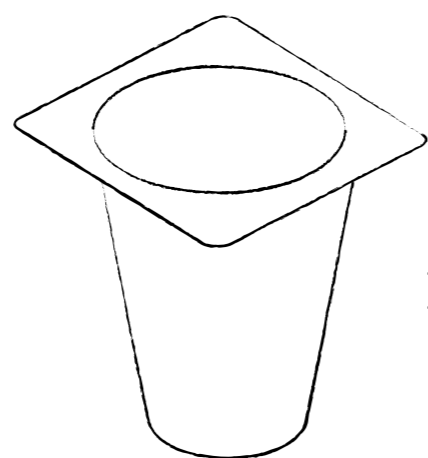
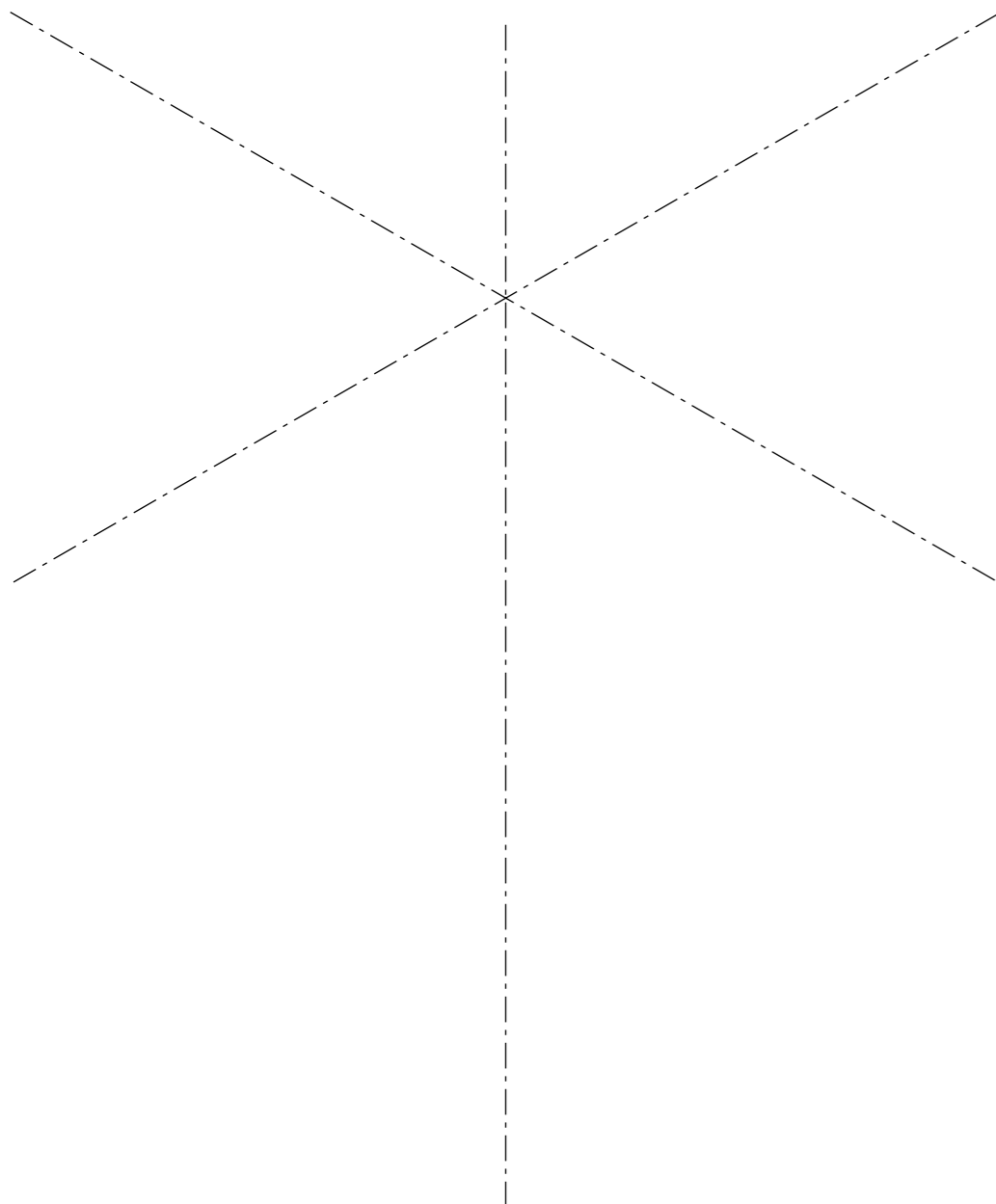


1 (a) A sketch of a plastic yoghurt pot is shown on the right.

On the centre lines below construct a full size isometric drawing of the yoghurt pot. [10]



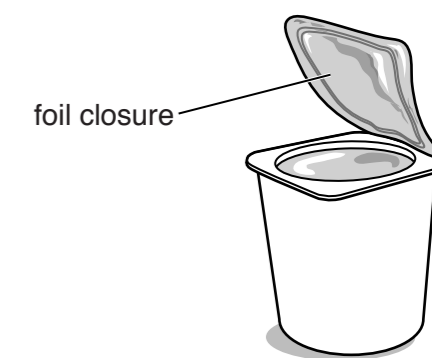
top: 80 × 80
 top circle: Ø60
 bottom circle: Ø40
 height: 90
 Estimate any missing dimensions

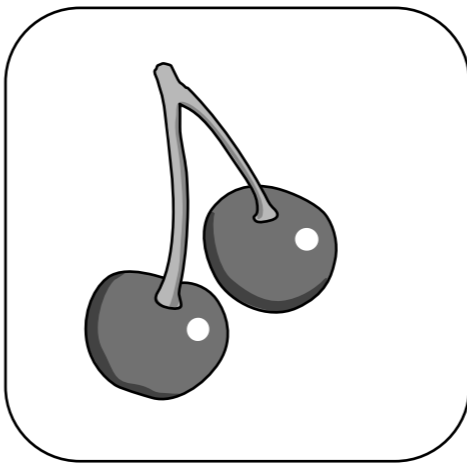
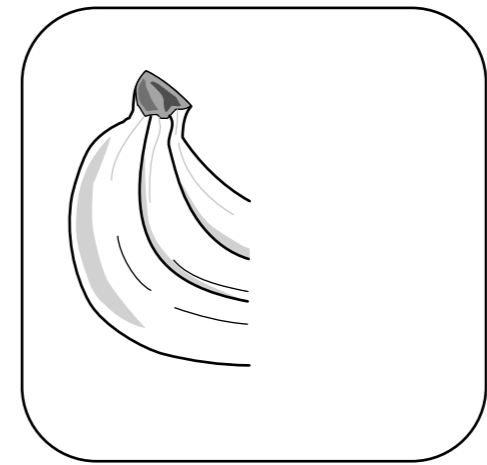
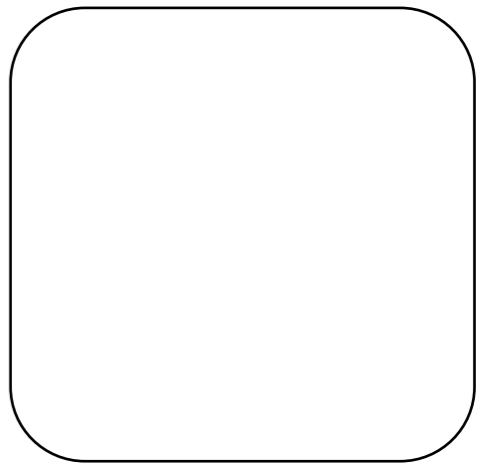


(d) The top of the yoghurt pot is sealed with a foil closure that shows the flavour of the yoghurt.

Complete the table below by:

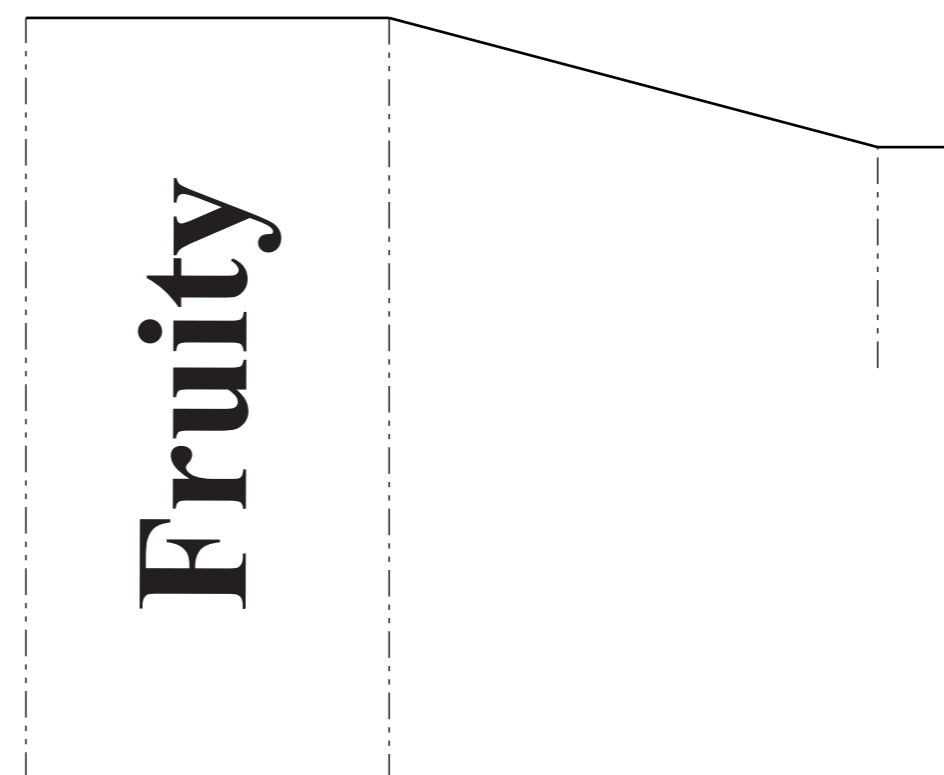
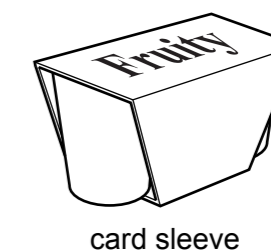
- (i) Adding the remaining half of the bananas; [2]
- (ii) Adding a strawberry in the same style as the cherries. [3]



		
cherry	banana	strawberry

(e) Three yoghurt pots are packaged in a card sleeve.

Complete the drawing of the development (net) of the card sleeve shown below. [8]



(b) (i) Name the manufacturing process used to make the plastic yoghurt pot. [1]

.....[1]

(ii) State **two** reasons why this manufacturing process is suitable for producing plastic yoghurt pots. [1]

1.[1]

.....[1]

2.[1]

.....[1]

(c) The symbol on the right is moulded into the base of the plastic yoghurt pot.



Explain the reason for putting this symbol on the plastic yoghurt pot. [2]

.....[2]

(f) A graph is one method of showing the annual sales of different flavour yoghurts.

State **two** other methods of showing this information.

1.[1]

2.[1]

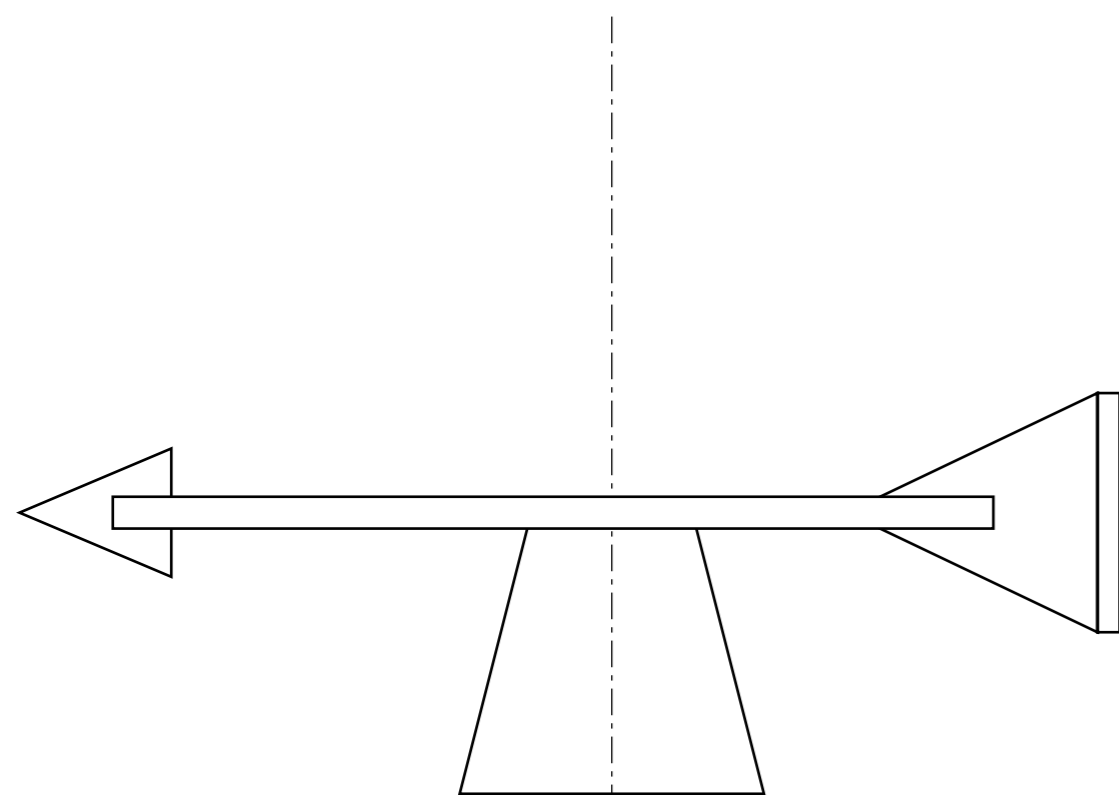
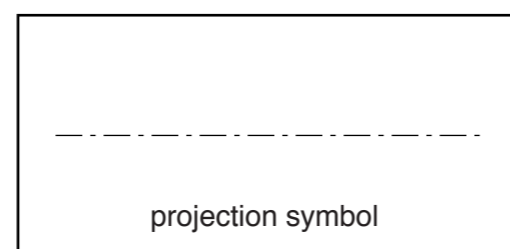
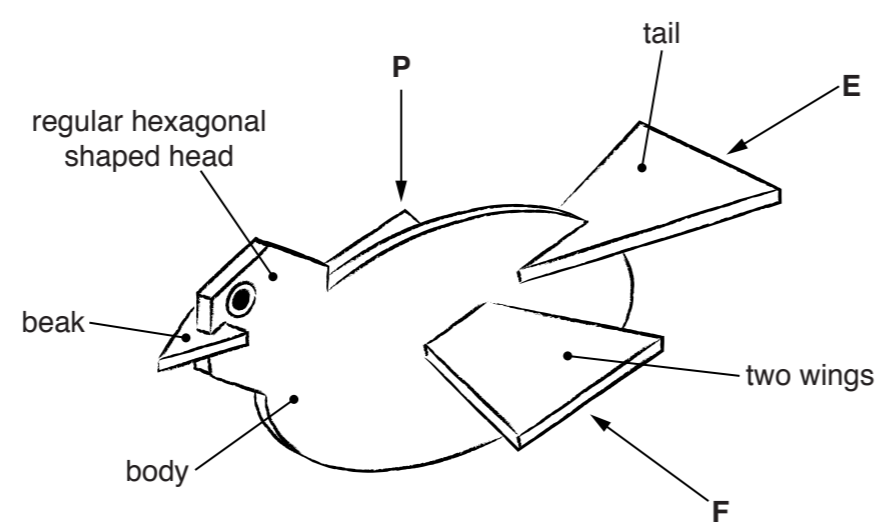
[Turn over]

2 A sketch of a bird made from foam board is shown on the right.

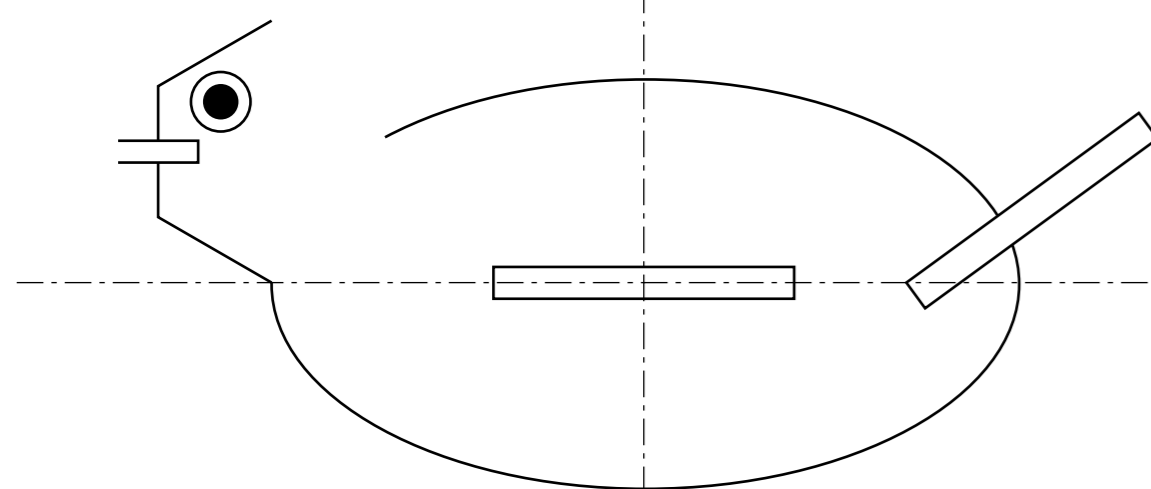
(a) In the space below finish the orthographic drawing of the bird by completing:

- (i) the plan in the direction of P; [3]
- (ii) the front view in the direction of F; [3]
- (iii) the end view in the direction of E. [6]

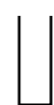
(b) Add the projection symbol in the box provided. [3]



plan

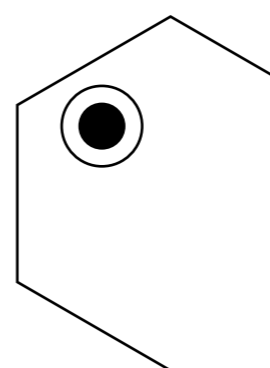


front view



end view

(c) On the centre lines below complete the full size drawing of the body of the bird by constructing an ellipse with major axis 180 and minor axis 80. [9]



(d) Complete the table below to show the names of the shapes used for the wings, beak and the head of the bird. [3]

.....	
.....	
regular hexagon	

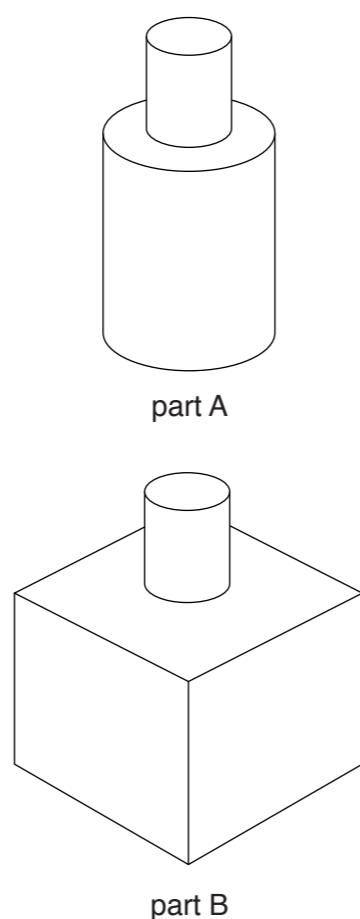
(e) (i) Name an adhesive that could be used to join the two wings to the body. [1]

.....[1]

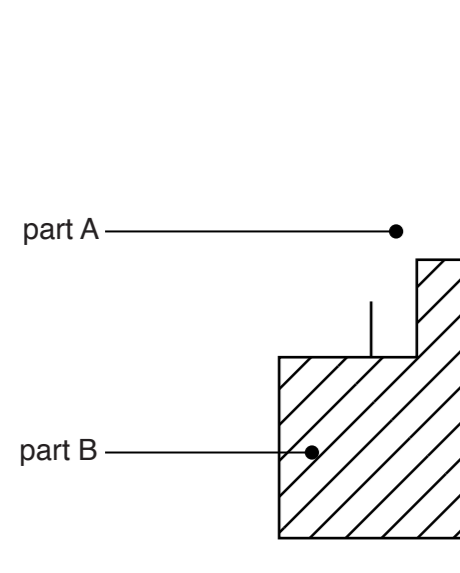
(ii) In the space below use a sketch to show a method of slotting the tail into the body. [2]

3 Two parts of a plastic toy building kit are shown on the right.

- (a) (i) Render part A to look like shiny plastic. [3]
 (ii) Add thick and thin lines to enhance the appearance of part B. [4]
 (iii) State **two** reasons why plastic is a suitable material for the toy building kit.
 1.[1]
 2.[1]



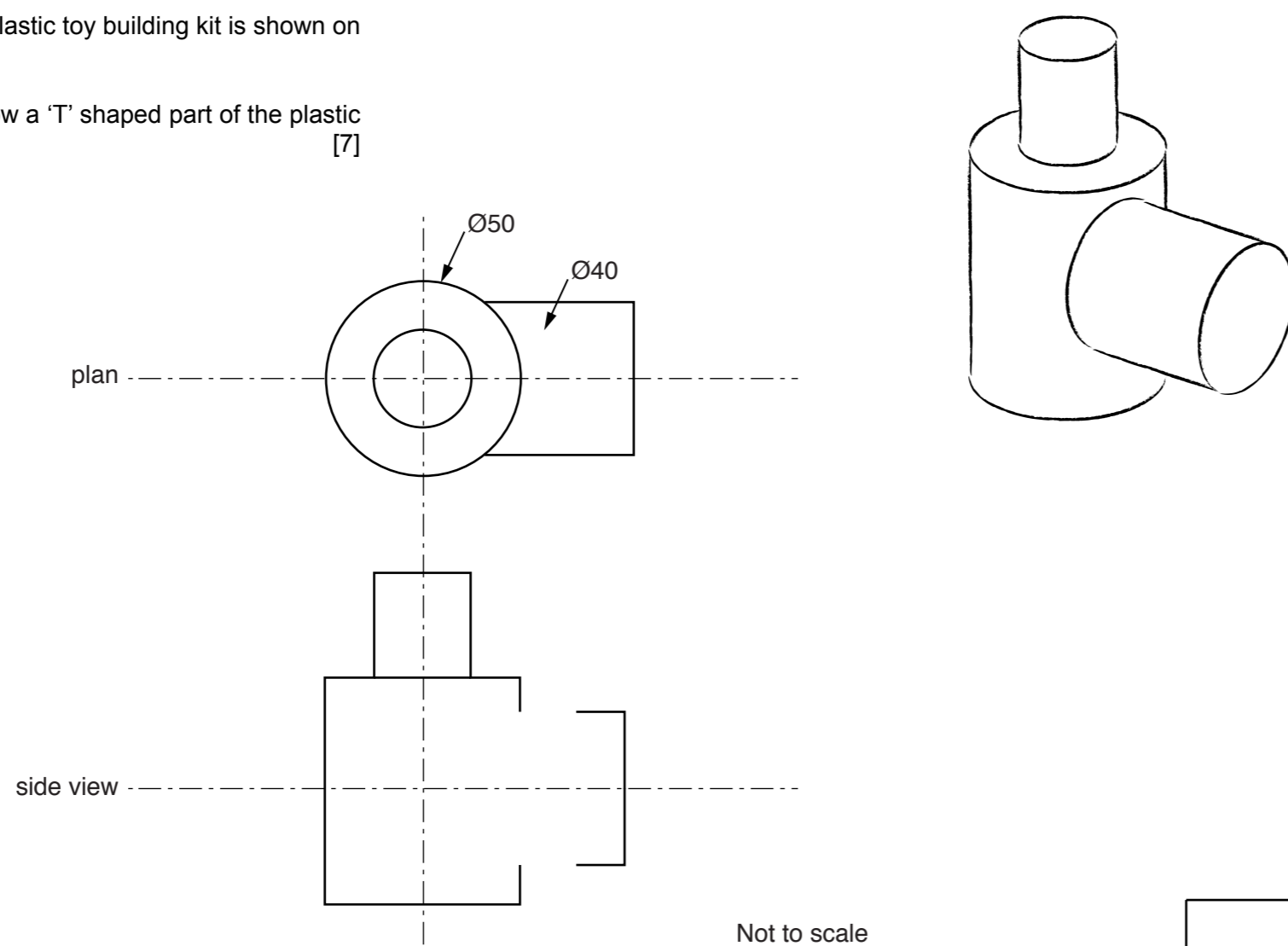
(b) Complete the drawing below to show a sectional view of part A and part B slotted together. [7]



(c) The parts of the plastic toy building kit are designed to be 'push fit'. Explain what is meant by the term 'push fit'. [2]

.....

(d) A sketch of a 'T' shaped part of the plastic toy building kit is shown on the right. Complete the side view below to show a 'T' shaped part of the plastic toy building kit. [7]



Not to scale

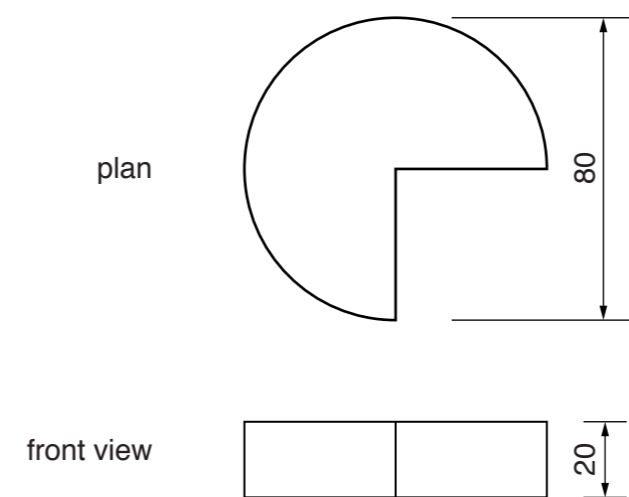
4 A cheese manufacturer wishes to divide different shaped cheeses into individual portions.

- (a) Complete the table below to show four different shaped cheeses divided into portions by:
 (i) completing the outer square and dividing into four equal squares; [3]
 (ii) drawing a Ø40 circle and dividing into four equal sectors; [4]
 (iii) drawing an octagon on the given base and dividing into eight equal parts; [4]
 (iv) dividing the equilateral triangle into three equal triangles. [4]

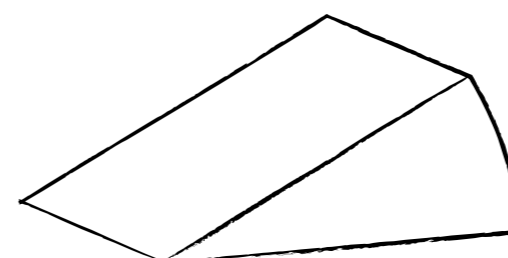
A square divided into four equal squares	A circle divided into four equal sectors	An octagon divided into eight equal portions	An equilateral triangle divided into three equal triangles

(b) Orthographic views of a circular cheese with a portion removed are shown below.

Draw a 45/45 degree planometric view of the cheese. [7]



(c) The sketch below of a portion of cheese is to be used in a design for a cartoon character called Charlie Cheese. In the space on the right sketch a design for the cartoon character. [3]



[Turn over

Candidate Surname

Other Names

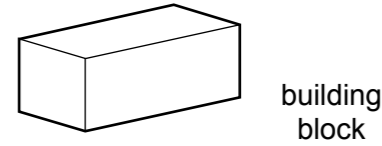
Centre Number

Candidate Number

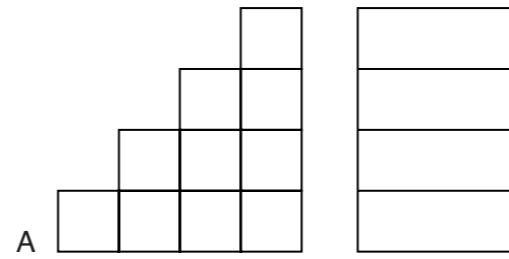
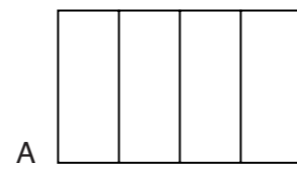
Examiner's use only

.....

5 The set of four steps shown in the orthographic views on the right are made from ten of the blocks shown below.

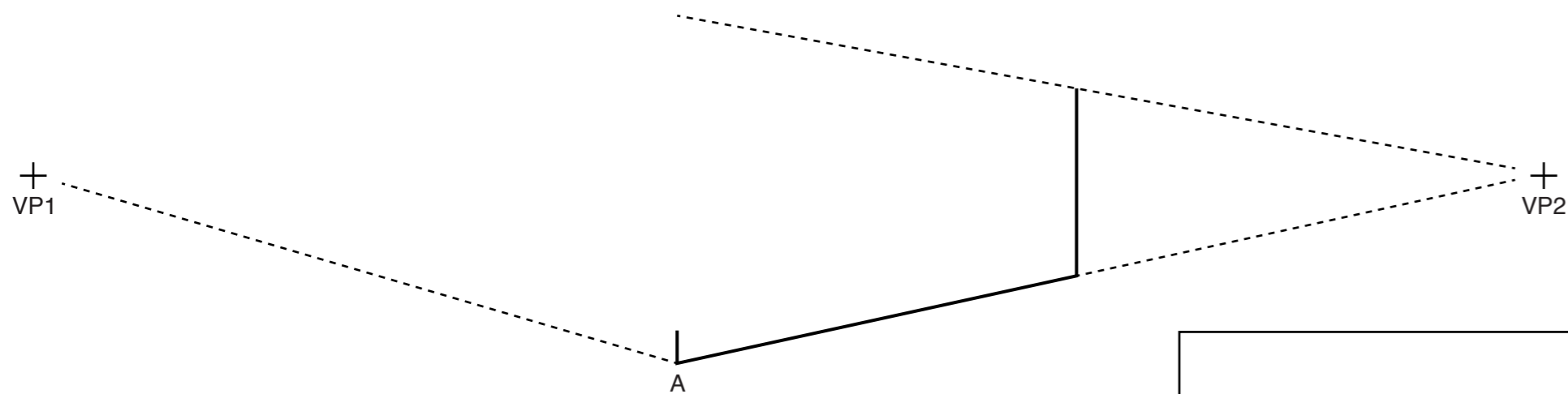


building block



model of steps made from ten building blocks

(a) Complete the estimated two point perspective drawing of the steps below. [10]

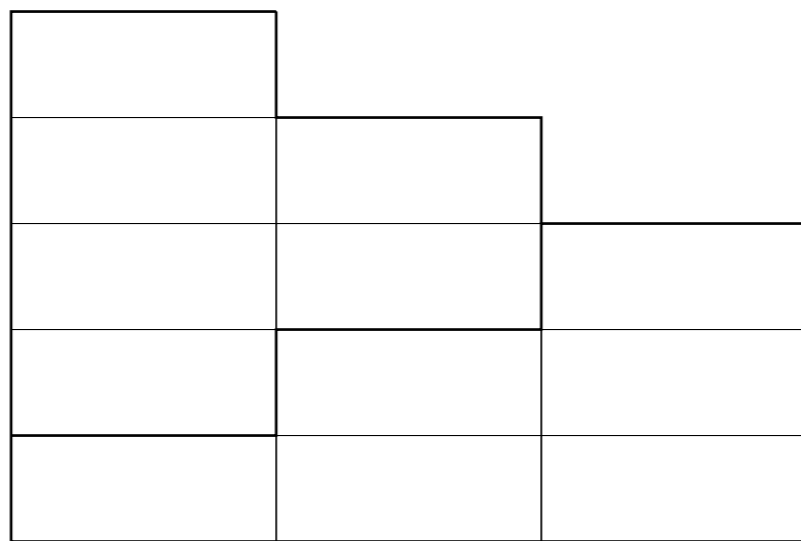
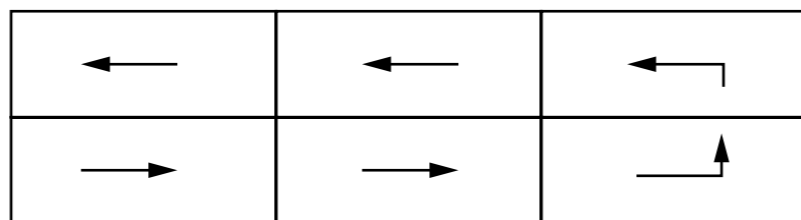
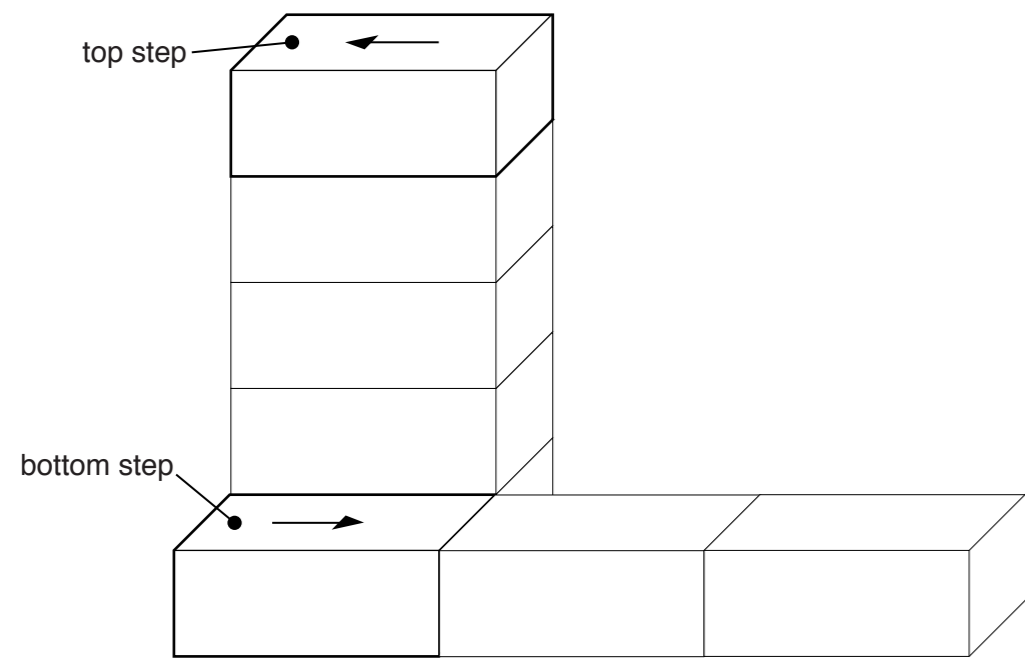


(b) In the box on the right sketch a design that uses 15 blocks to create a set of five steps. [2]

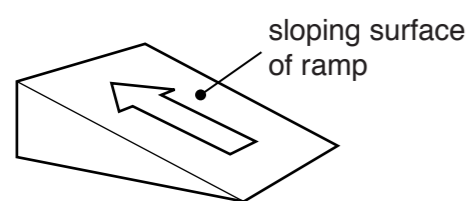


(c) The set of five steps shown in the orthographic views on the right below are made from eighteen building blocks.

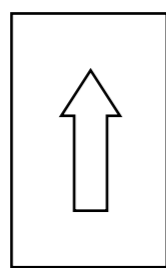
Complete the oblique drawing of the steps below. [8]



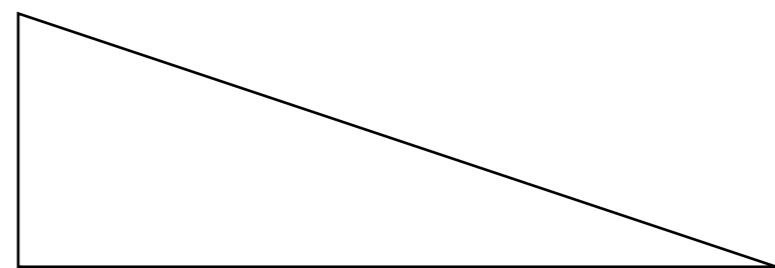
(d) A sketch of a ramp is shown below.



Draw the true shape of the sloping surface of the ramp, including the arrow, by projecting it from the side view. [5]



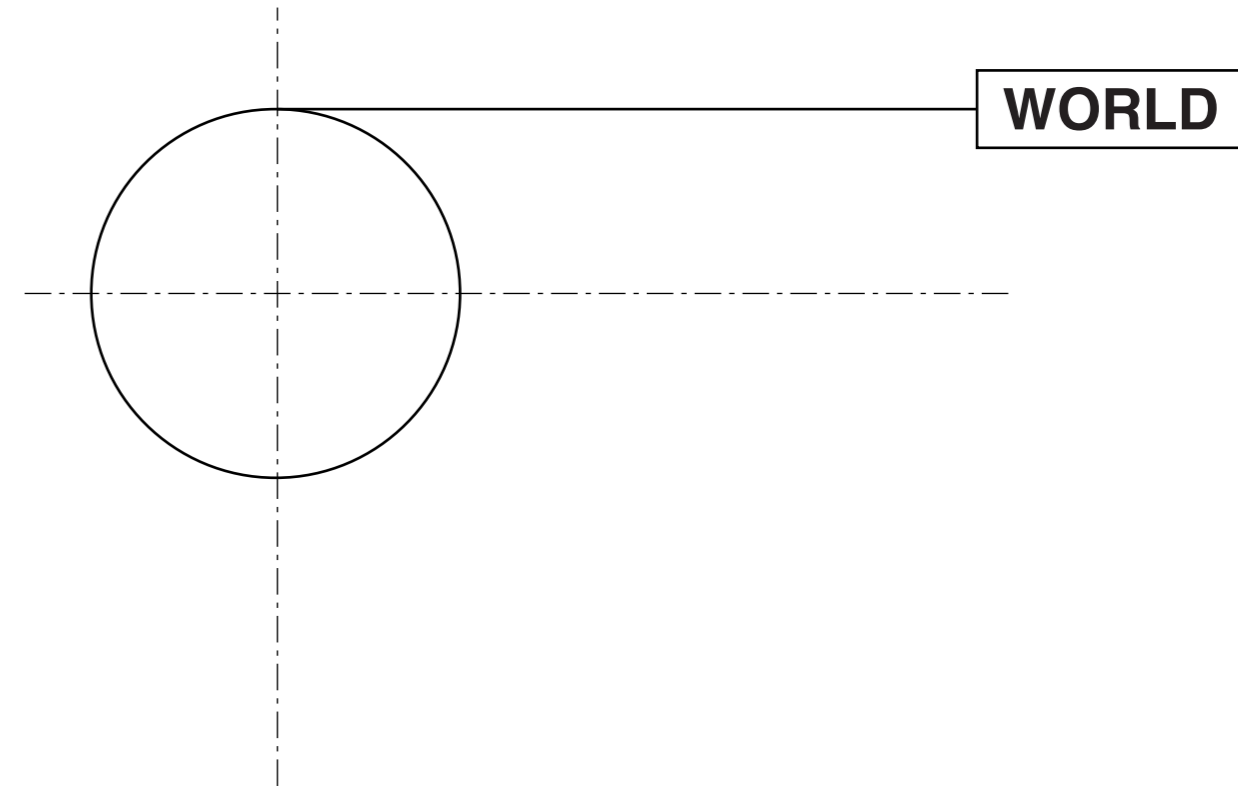
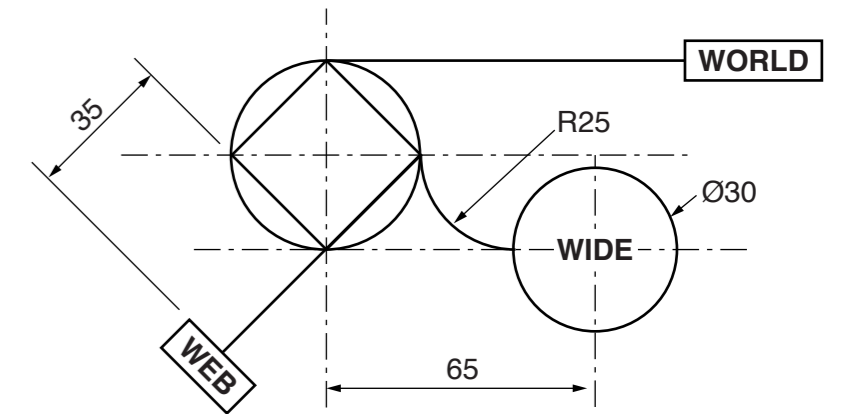
end view



side view

6 A design for a logo for a recruitment agency is shown on the right.

(a) Complete the drawing of the logo below. [10]



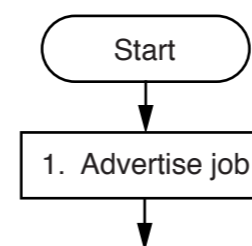
(b) The five stages in a recruitment process are:

1. Advertise job
2. Read applications
3. Invite candidates
4. Interview
5. Offer job.

(c) The display below is to be used by the recruitment agency.

Add sketches and notes to the drawing below to show how a plate cam could be used to make the middle person move up and down as a handle is turned. [6]

(i) Complete the flow chart below to show the stages in the recruitment process. [7]



(ii) Describe where and why a decision box would be added to the flow chart. [2]

.....

 [2]

