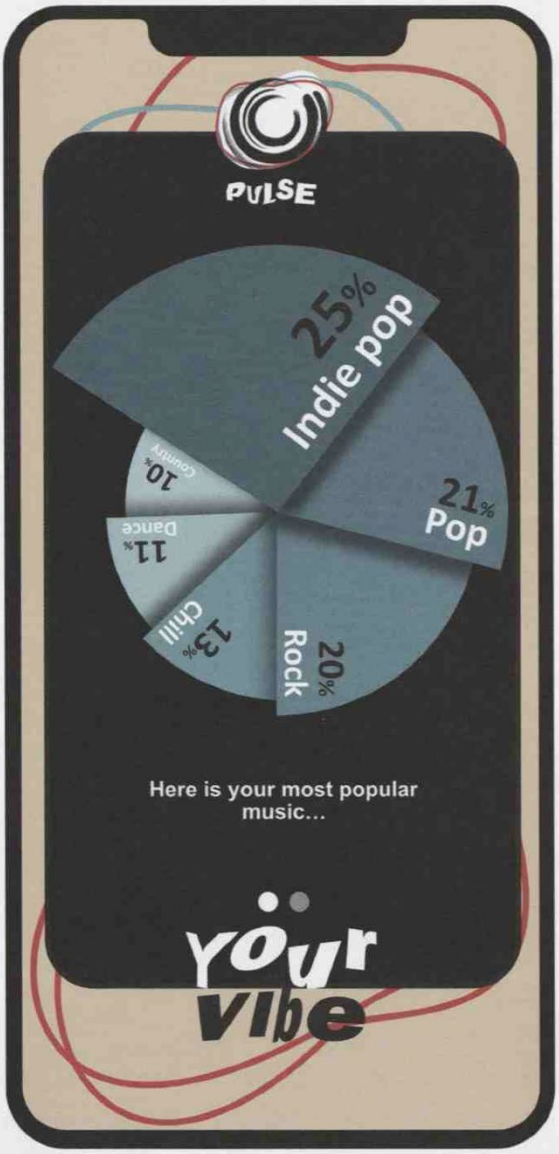
Candidate 3 evidence

DO NOT WRITE IN THIS MARGIN

Total marks — 80

Attempt ALL questions

1. Pulse is a music streaming app for smartphones. A screen from the app is shown below.



MARKS | DO NOT WRITE IN THIS MARGIN

1. **(continued)**

(a) The screen shows a user's most popular types of music listened to over a year.

(i) State the name of the chart used. 1

Pie

(ii) Explain why this chart is appropriate to communicate this information. 1

it displays the amount of genres youve listend too.

(b) Describe **three** ways the graphic artist has graphically communicated the most popular types of music on the screen. 3

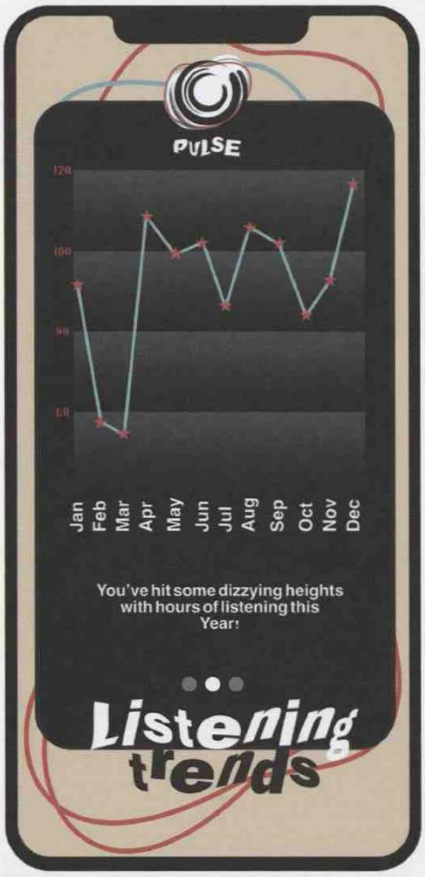
- Shows the users favourite generes Easily
- Made the Higher Percentages bigger Sections
- The Higher the Percentage, the darker the Colour gets.

[Turn over

MARKS | DO NOT WRITE IN THIS MARGIN

1. (continued)

A second screen from the app is shown below.



(c) This graph shows the number of hours a user listened to music each month.

(i) State the name of the graph used above. 1

line

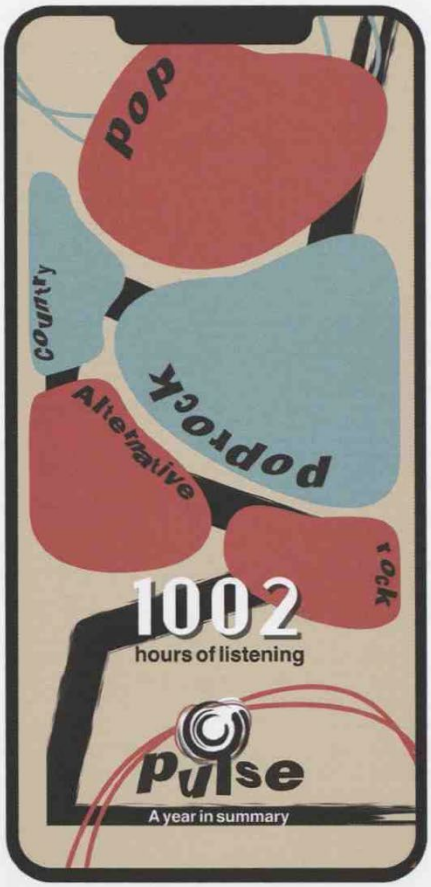
(ii) Explain why this graph is appropriate to communicate this information. 1

it is appropriate because it shows the month that had the most listening hours effectively.

MARKS | DO NOT WRITE IN THIS MARGIN

1. (continued)

A graphic layout showing another screen from the app is shown below.



(d) Describe **two** ways each of the following design elements and principles have been used in the layout:

(i) Depth Depth has been used by adding shadows to the "1002" text Making it appear 3D 2

MARKS | DO NOT WRITE IN THIS MARGIN

1. (d) (continued)

(ii) Unity Unity has been used by making the Red lines in the backgrand the same Colour as the Red blobs. 2

(iii) Contrast Contrast has been used in the logo by overlapping black on to a white background. 2

(e) Describe **one** way alignment has been used in the layout. 1

· the blobs line up on the Left.

[Turn over

MARKS | DO NOT WRITE IN THIS MARGIN

2. A landscape design company has produced graphics for a new garden studio shown below.



preliminary graphic



promotional graphic

(a) (i) Explain the purpose of a promotional graphic. 1

- Show how [redacted] it would look
- Realistic

A digital version of the manual preliminary graphic is created.

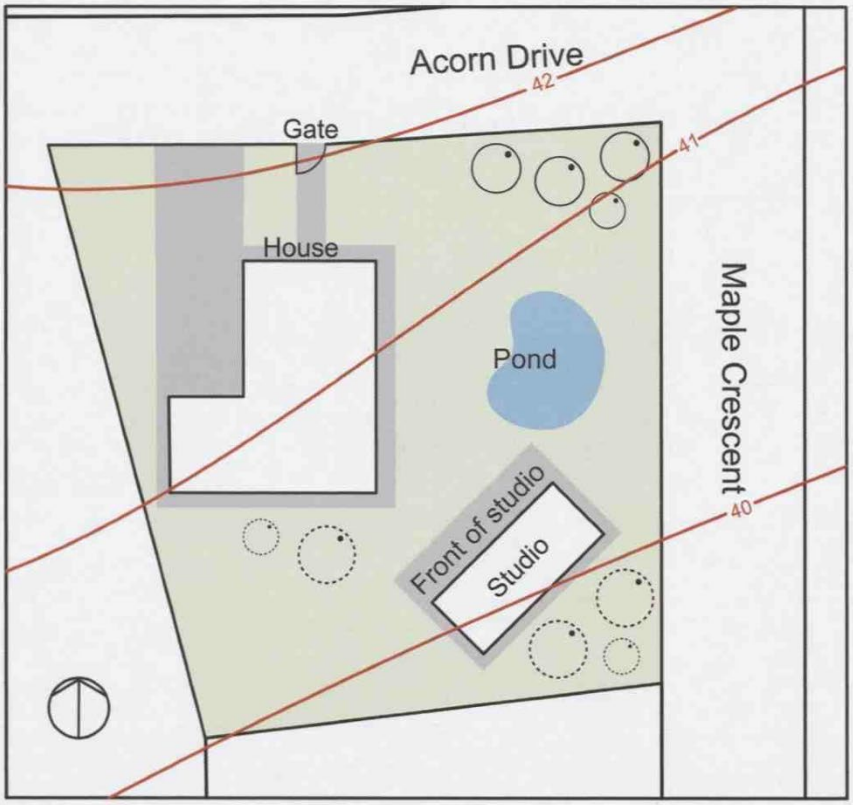
(ii) State the names of **two** input devices that could be used to convert the preliminary graphic into a digital file. 2

- Phone Camera
- Scanner

MARKS | DO NOT WRITE IN THIS MARGIN

2. **(continued)**

A site plan showing the proposed position of a garden studio is shown below.



(b) State a scale commonly used for a site plan. 1

1:500

(c) Contours are shown in red on the site plan.

Explain the purpose of contours on a site plan. 1

to show where any Potential wiring is

MARKS | DO NOT WRITE IN THIS MARGIN

2. **(continued)**

The front of the garden studio faces the house on the plot.

(d) State the direction the front of the garden studio faces. 1

North - West

(e) State the direction the pond is in relation to the house. 1

East

The site plan was produced by a designer who works from home.

(f) Describe **two** advantages of remote working. 2

· less emissions from not driving to work

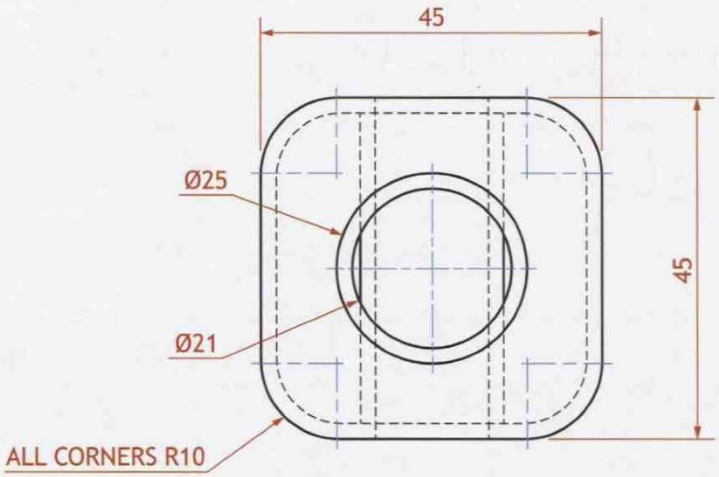
· less Money Spent by Commuting.

[Turn over

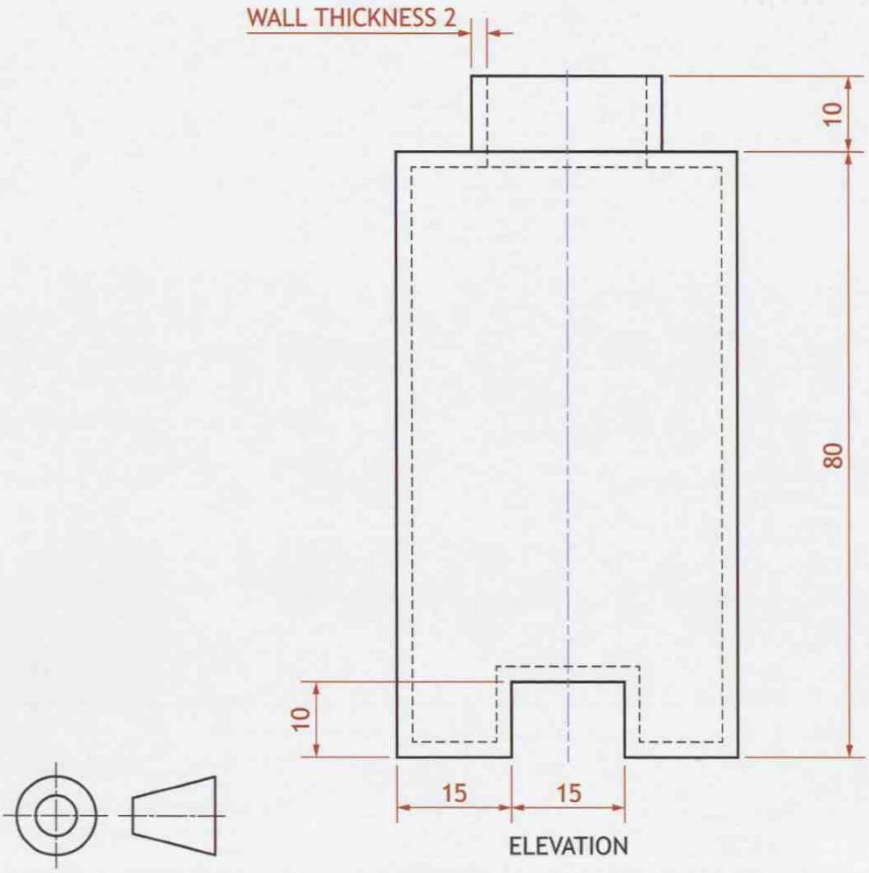
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3. A company has created a new drinks bottle for their product line. It has two parts: a body and a lid.

An orthographic drawing of the body is shown below.



PLAN



ELEVATION

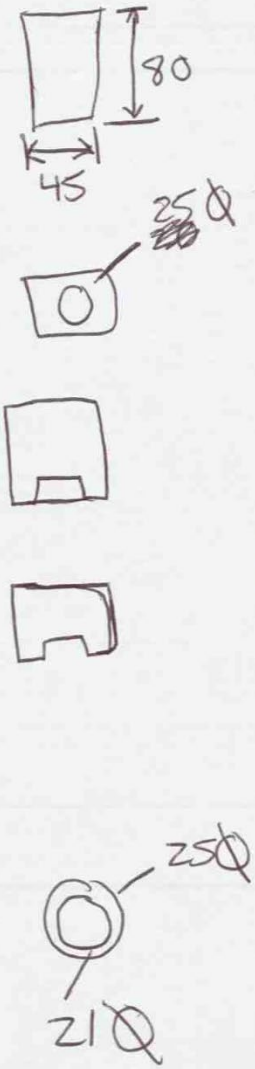
MARKS | DO NOT WRITE IN THIS MARGIN

3. (continued)

(a) Describe, using the correct dimensions and 3D CAD modelling terms, how you would use 3D CAD software to model the body.

You may use sketches to help support your answer. 6

- ~~Sketch~~ Sketch This
- Extrude up 45 mm
- Draw Circle on top
- ~~Draw~~ Draw Rectangle 15 x 10 mm on Bottom
- subtract extrude by 10 mm
- extrude Circle up by 10mm
- Shell it by ~~2mm~~ 2mm on Each side

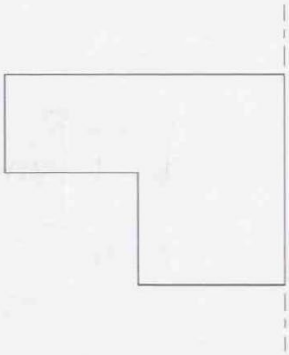


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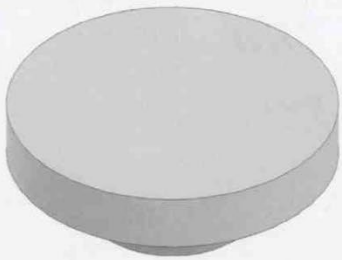
3. **(continued)**

The stages to create the 3D CAD model of the lid are shown below.

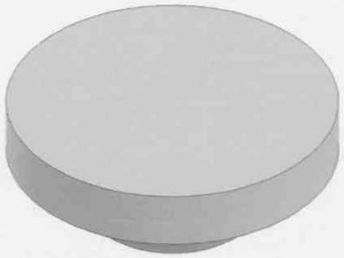
Stage 1



Stage 2



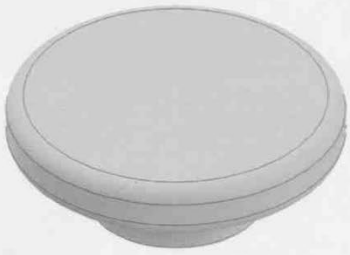
Stage 2



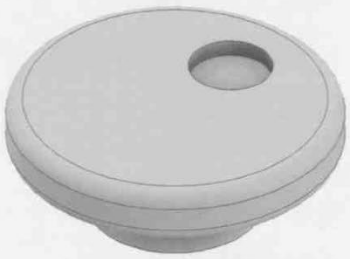
Stage 3



Stage 3



Stage 4



MARKS | DO NOT WRITE IN THIS MARGIN

3. (continued)

(b) (i) State the name of the 3D CAD command used to go from stage 1 to stage 2. 1

Revolve

(ii) State the name of the 3D CAD edit used to go from stage 2 to stage 3. 1

fillet

(iii) State the name of the 3D CAD edit used to go from stage 3 to stage 4. 1

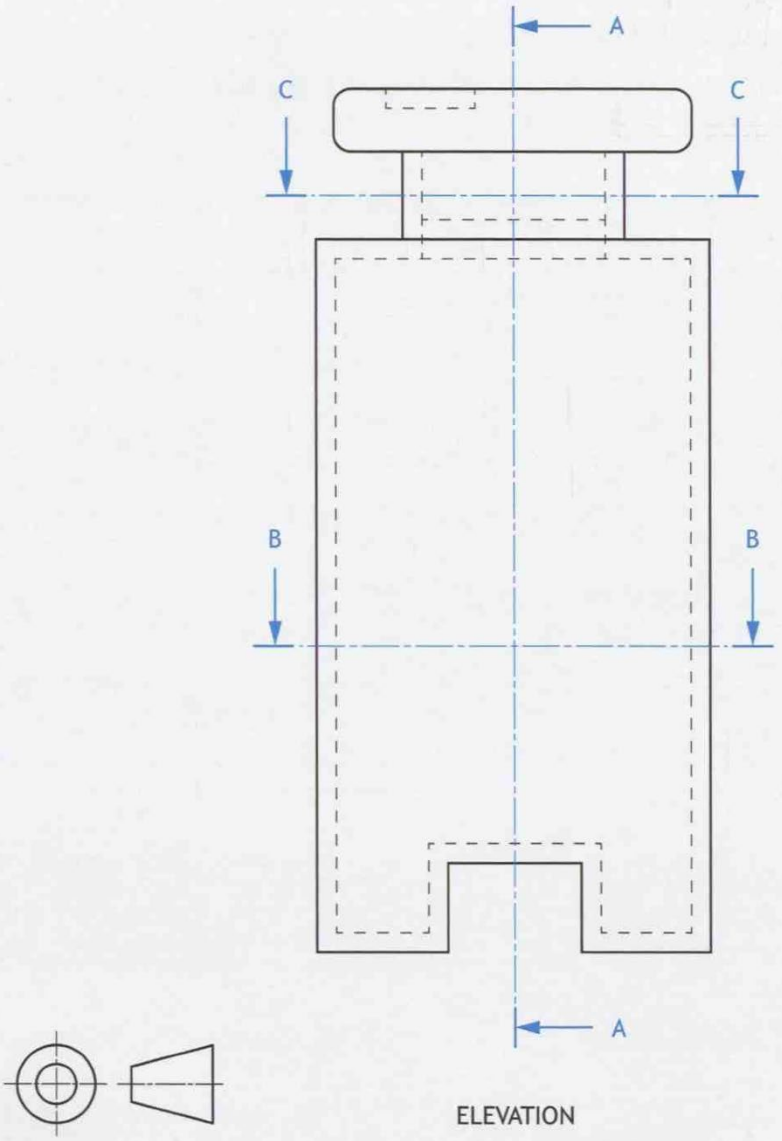
Subtract Extrude

[Turn over

DO NOT WRITE IN THIS MARGIN

3. (continued)

The elevation of the assembled bottle is shown below.



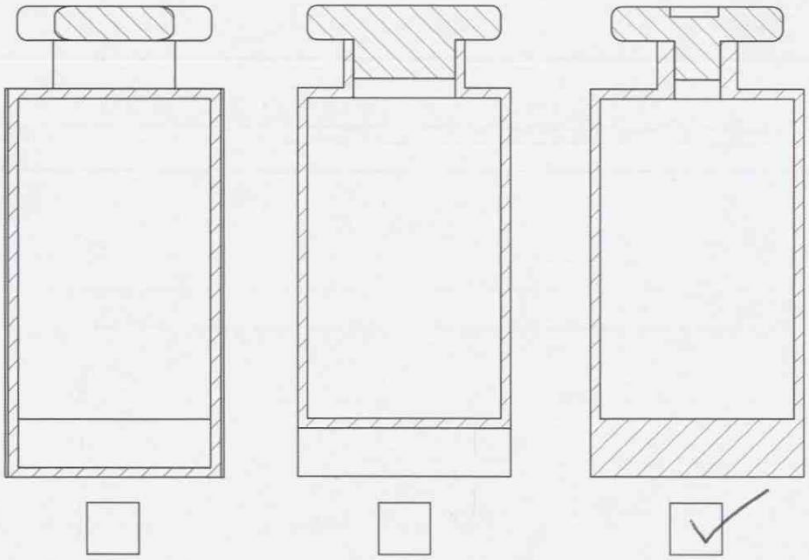
ELEVATION

3. (continued) MARKS DO NOT WRITE IN THIS MARGIN

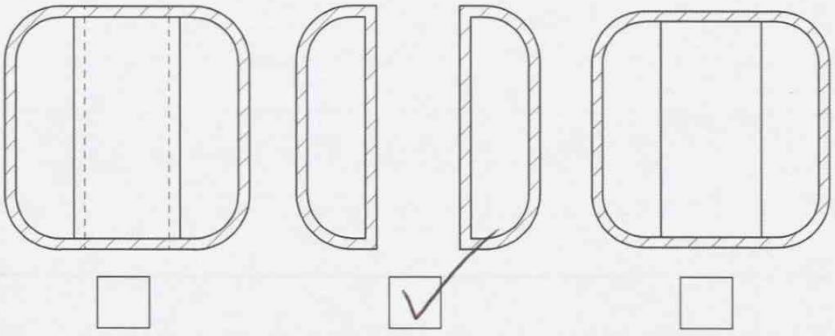
(c) Three sectional views projected from the elevation are shown below.

Identify the correct sectional view for each cutting plane by ticking (✓) a box below.

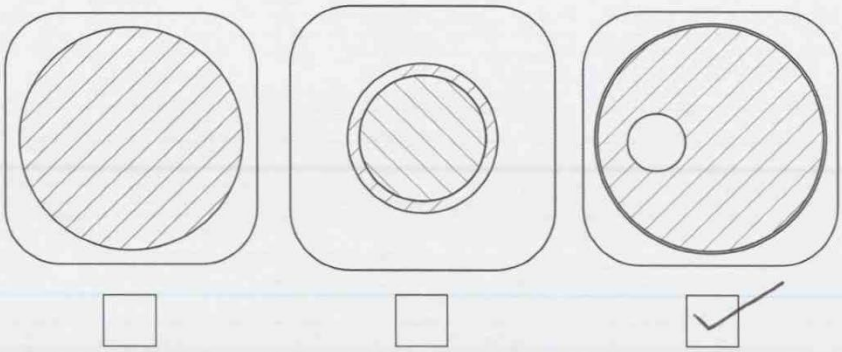
(i) Cutting plane A–A 1



(ii) Cutting plane B–B 1



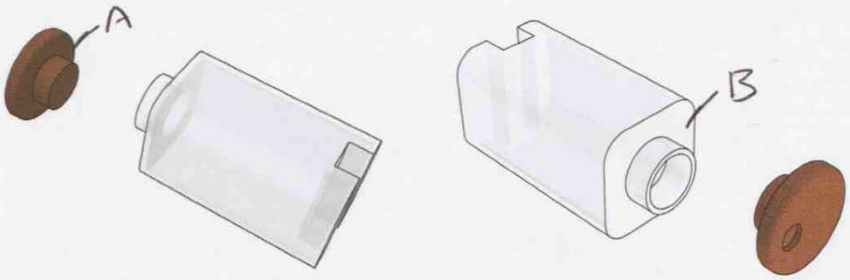
(iii) Cutting plane C–C 1



MARKS | DO NOT WRITE IN THIS MARGIN

3. (continued)

The bottle parts were assembled using 3D CAD assembly techniques.



(d) Describe, using 3D CAD constraints, how to assemble the bottle and lid. 2
You may annotate the graphic shown above to support your answer.

constrain the centre line of the lid with the ~~bottle~~ bottle on Additional space

MARKS | DO NOT WRITE IN THIS MARGIN

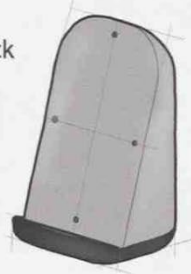
4. A designer has created manual preliminary sketches for a smartphone charging dock.

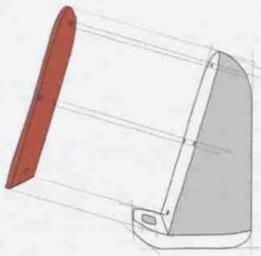
(a) Describe **two** reasons for creating preliminary sketches. 2

- Quickly Puts ideas on the Page
- gives designers an idea of what their Product would look like.

The designer created more preliminary sketches using digital methods. Two of the preliminary sketches are shown below.

charging dock concept





dock with detachable face plate

(b) Describe **two** advantages of creating digital sketches over manual methods. 2

- Quicker - Can Save time
- Enviromentally friendly by not wasting Paper.

(c) The designer displays their work in an online portfolio.

Explain **two** benefits to the designer of having their portfolio published online rather than being printed. 2

- Easy Acess for Clients to look at.
- not lost Easily

MARKS | DO NOT WRITE IN THIS MARGIN

4. (continued)

An orthographic drawing and rendered pictorial view of the charging dock are shown below.

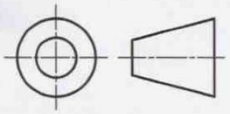


PLAN

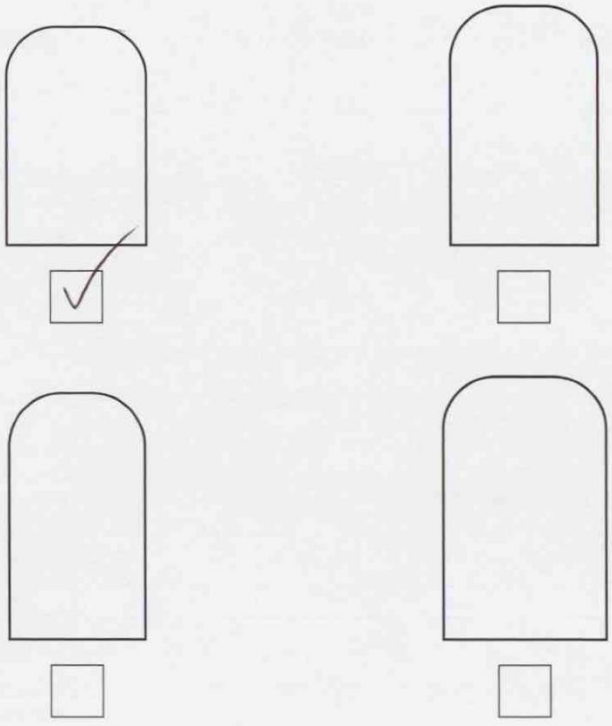


ELEVATION





(d) Identify the correct true shape of the sloping surface A–A by ticking (✓) a box below. 1

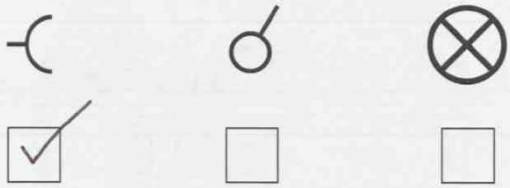


MARKS | DO NOT WRITE IN THIS MARGIN

4. (continued)

(e) The charging dock will be connected to a socket.

Identify the correct British Standard symbol for a socket by ticking (✓) a box below. 1



[Turn over

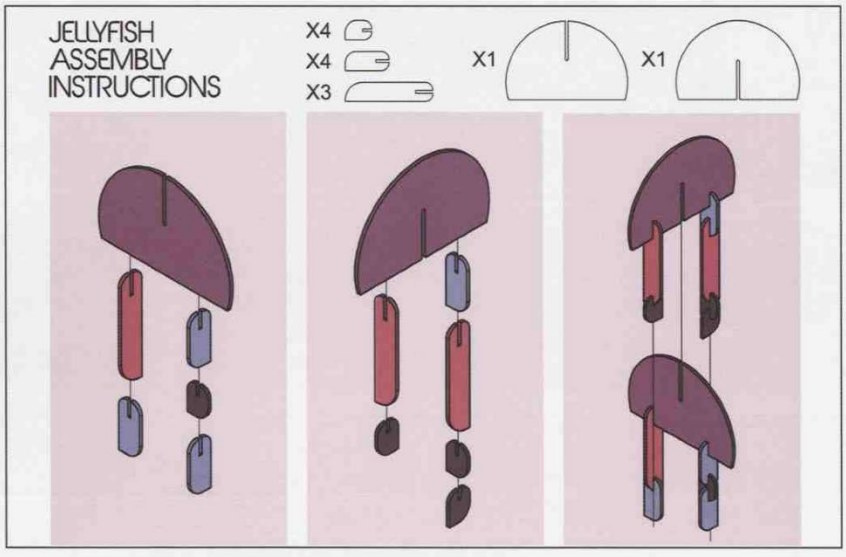
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5. A manufacturer has produced a range of toys. A 3D CAD illustration of a jellyfish toy is shown below.



jellyfish toy

The assembly instructions for the jellyfish toy are shown below.

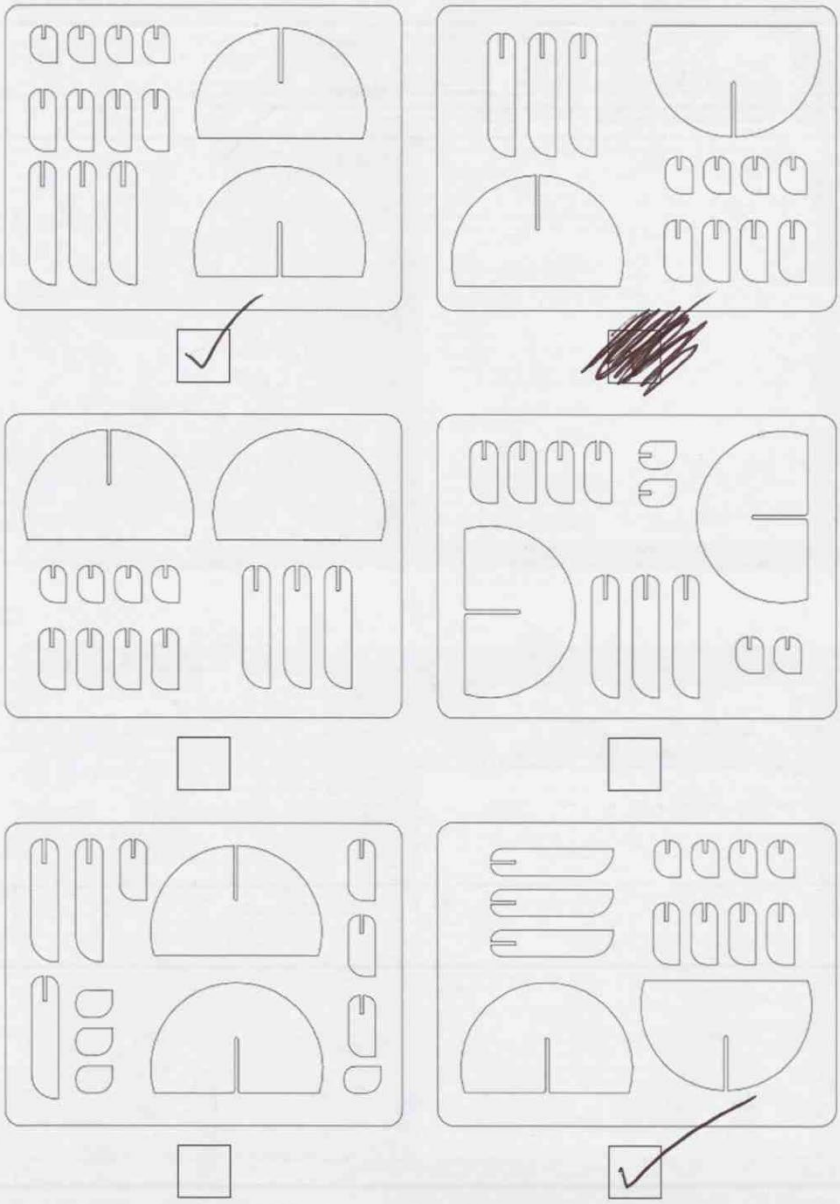


MARKS | DO NOT WRITE IN THIS MARGIN

5. (continued)

(a) The jellyfish toy parts are cut out from one sheet of material. Some layouts are shown below.

Identify the **two** correct layouts by ticking (✓) **two** boxes. 2



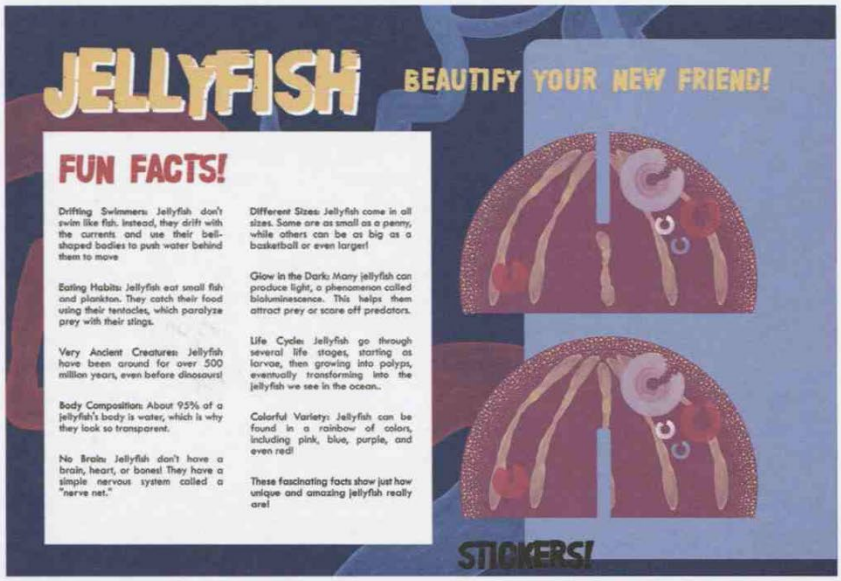
[Turn over

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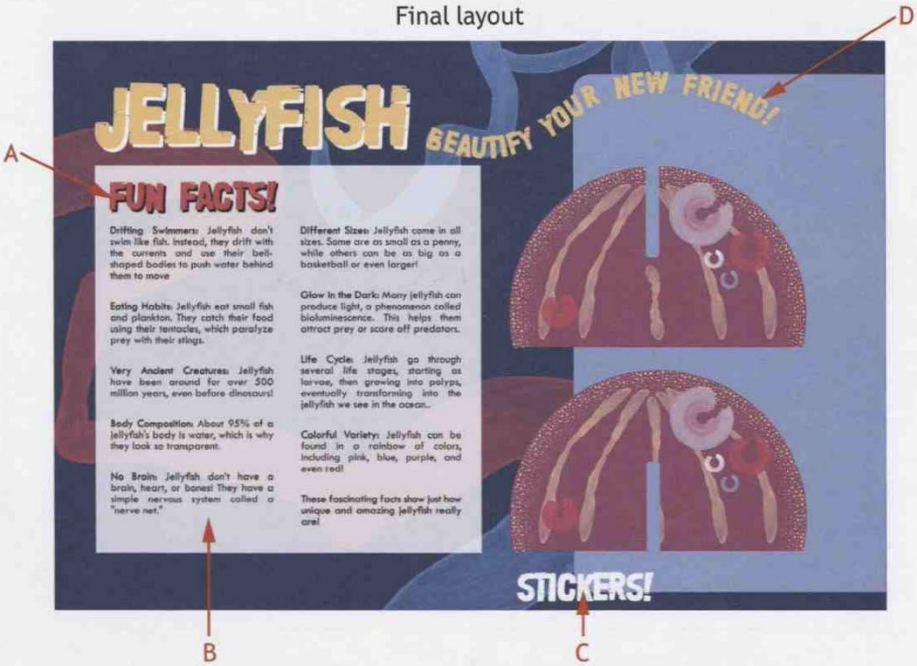
5. (continued)

The jellyfish toy is sold with a sticker fact sheet. The first draft, and final layout of the graphics are shown below.

Draft layout



Final layout



MARKS | DO NOT WRITE IN THIS MARGIN

5. (continued)

(b) State the names of the DTP edits, A to D, applied to the final layout, shown opposite.

Do not refer to scaling or resizing in your answer, and you must give a different answer for each response.

(i) Edit A to the 'fun facts' text: Drop shadow 1

(ii) Edit B to the white box: transparency 1

(iii) Edit C to the 'STICKERS' text: Reverse text 1

(iv) Edit D to the 'BEAUTIFY YOUR NEW FRIEND' text: flow text 1

(c) Describe, giving **two** reasons, the effect yellow-orange has on the title. 2

- Makes it stand out on a dark blue backgrand.
- Makes the task seem fun and Happy.

Colours were selected by referring to the colour wheel.

(d) Complete the table below stating whether the colours are primary, secondary or tertiary. 3

Colour	Primary, Secondary or Tertiary
Purple	Secondary
Blue	Primary
Yellow-orange	Tertiary

[Turn over

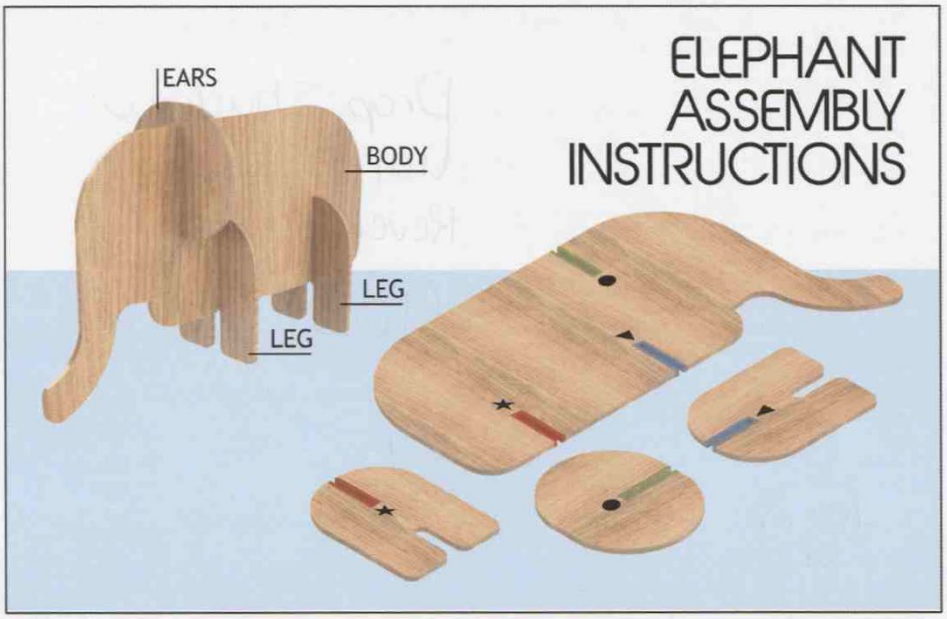
X8357501 25

page 25

MARKS | DO NOT WRITE IN THIS MARGIN

5. (continued)

Assembly instructions for an elephant toy are shown below.



(e) Identify **two** features of the assembly instructions that make them easy to understand. 2

- labels on where each part is.
- Colours and shapes to know what peices slot toghether.

MARKS | DO NOT WRITE IN THIS MARGIN

6. A rendered 3D CAD illustration of a bottle holder is shown below.



(a) State the name of **two** CAD Illustration techniques that have been applied to the model. 2

- Materials
- Lighting.

(b) Explain **one** effect CAD illustration techniques have on 3D models. 1

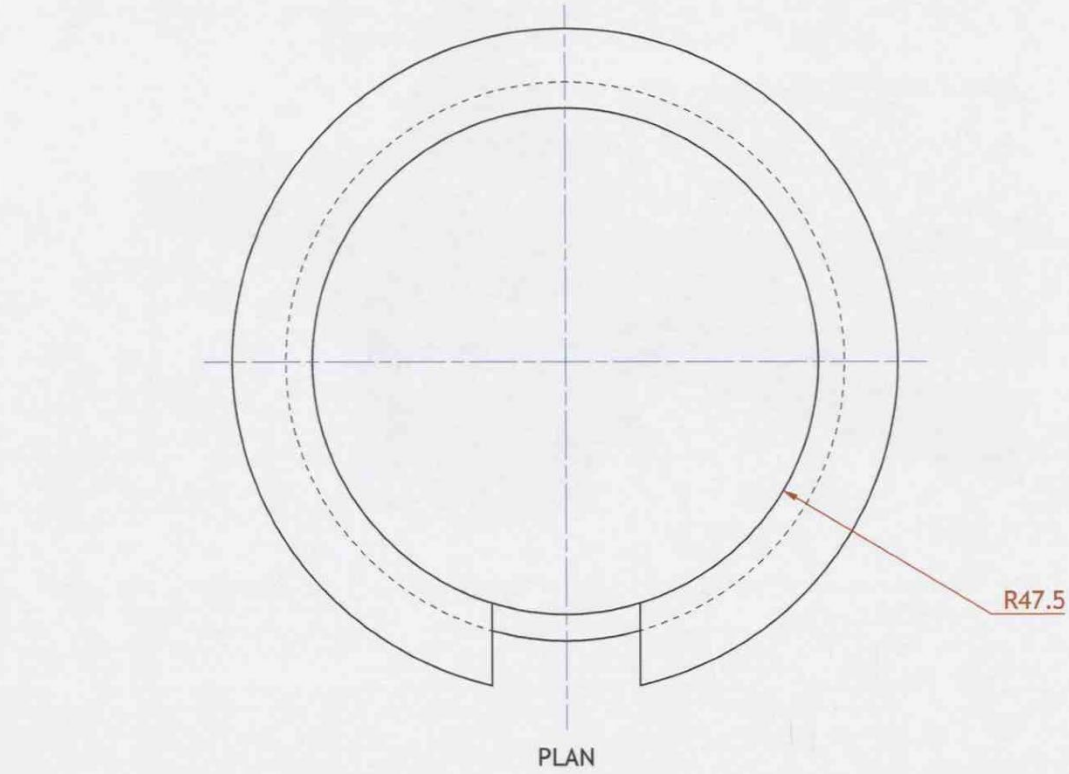
- makes them look more Realistic.

[Turn over

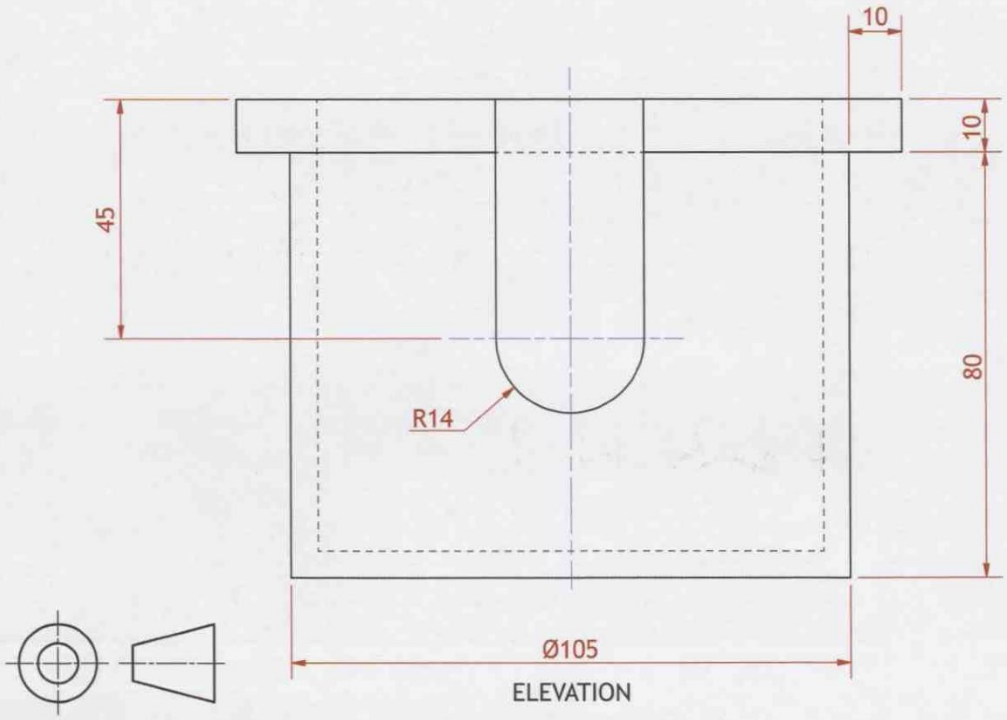
6. (continued)

DO NOT WRITE IN THIS MARGIN

An orthographic drawing of one of the bottle holder components is shown below.



PLAN



ELEVATION

MARKS | DO NOT WRITE IN THIS MARGIN

6. **(continued)**

(c) Describe, using the correct dimensions and 3D CAD modelling terms, how you would use 3D CAD software to model the bottle holder.

You may use sketches to support your answer. **5**

~~Sketch Marks~~

1 Sketch this

· Extrude up by 80 mm

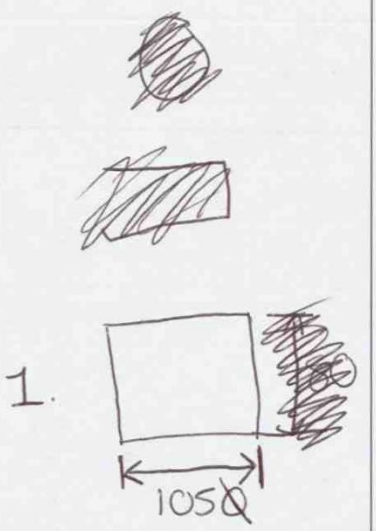
2. Sketch Circle on top 125Ø

· Extrude by 10mm

~~3. Draw Rectangle and by~~

3. Draw Rectangle 45x ~~xx~~ 30

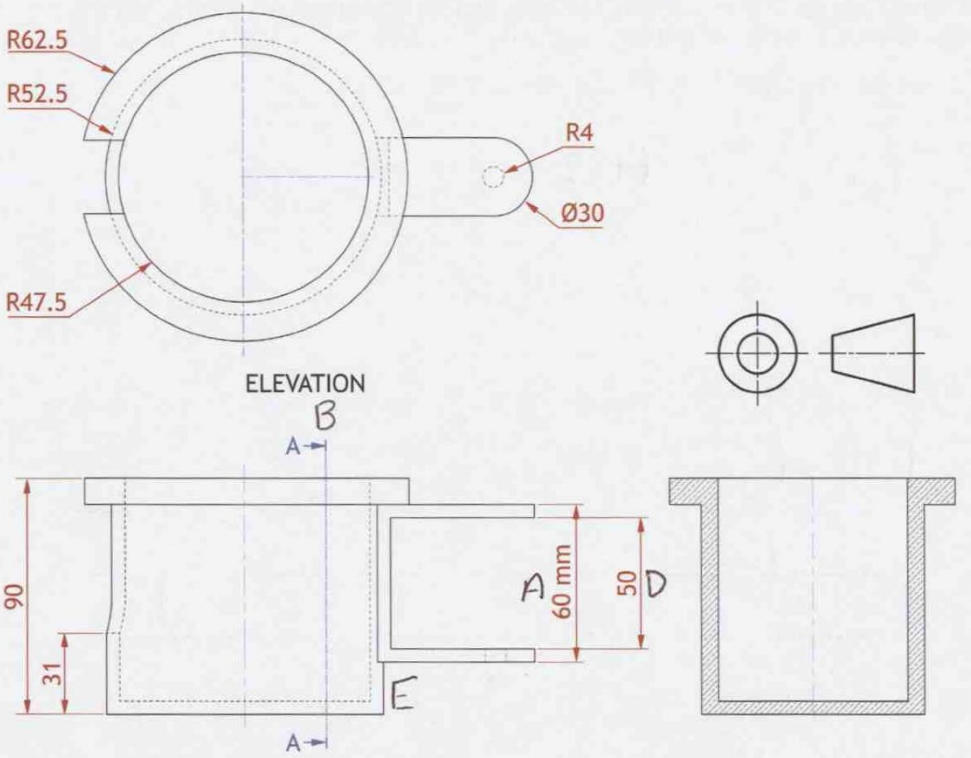
· Fillet ends by 14 mm



6. (continued)

MARKS | DO NOT WRITE IN THIS MARGIN

An orthographic drawing of the assembled bottle holder is shown below.



The orthographic drawing contains errors that do not conform to British Standards.

(d) Identify **six** errors in the orthographic drawing. 6

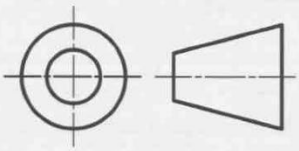
You may annotate the drawing to support your answer.

A- Adding units to dimensions
B- Cutting Plane in Wrong Place
C- [redacted] in Wrong order
[redacted]
E- Missing Dimensions
F- labels are Messed up
D- Dimensions Overlappineg

MARKS | DO NOT WRITE IN THIS MARGIN

6. (continued)

A title block will be added to the final orthographic drawing. The title block will include the symbol shown below.



(e) (i) Describe the purpose of this symbol. 1

Third Angle Projection

(ii) State **three** other pieces of information that should be included in a title block. 3

- Name
- Date
- Task title

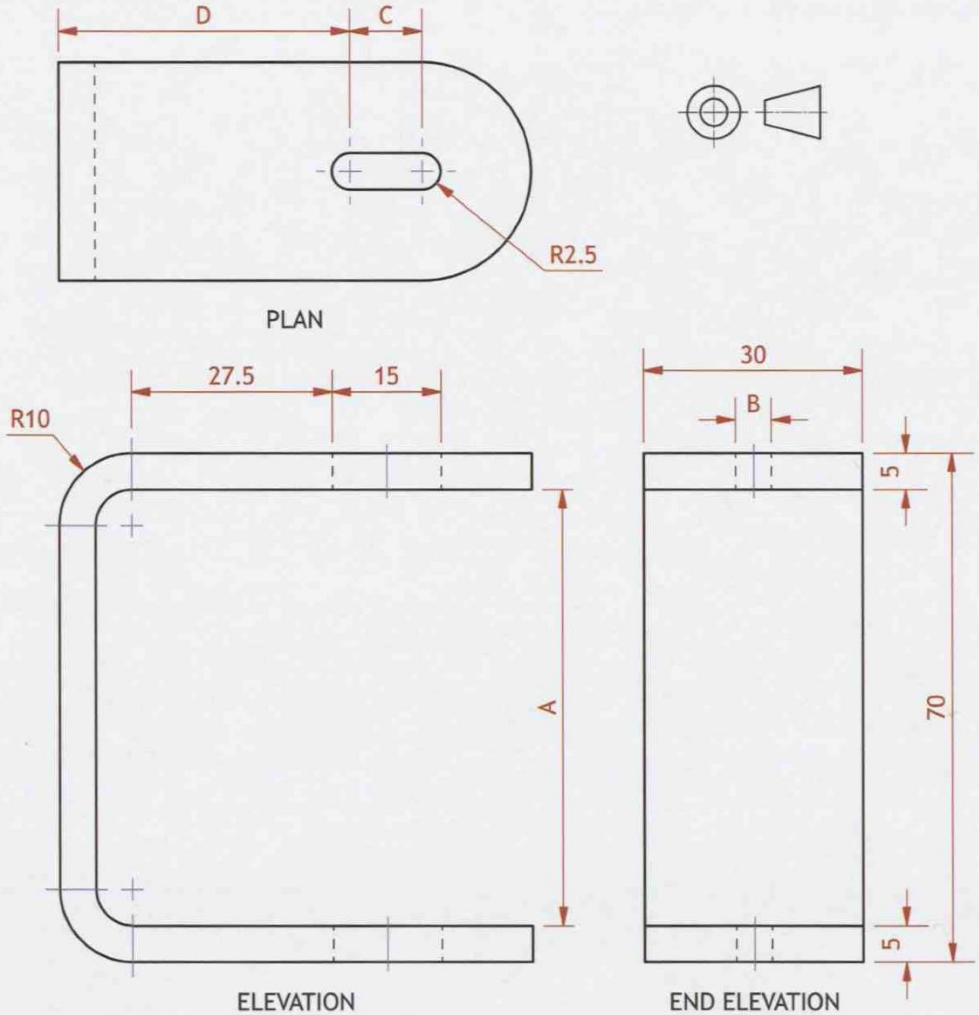
[Turn over

6. (continued)

MARKS

DO NOT WRITE IN THIS MARGIN

An updated orthographic drawing of another component from the bottle holder is shown below.



(f) Calculate the missing dimensions, A to D, from the orthographic drawing. 4

A = 60 mm

B = 5 mm

C = 12.5 mm

D = 47.5 mm

[END OF QUESTION PAPER]

DO NOT WRITE IN THIS MARGIN

ADDITIONAL SPACE FOR ANSWERS

3d). Constrain Centre line of Lid with Centre line of Battle.

. Then Constrain flat part of Lid with flat top of Battle (marked A & B)