

Candidate 6 evidence

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Total marks — 90
Attempt ALL questions

For questions 1 (a) to (f), refer to the information provided on supplementary sheets 1 and 2.

A three-fold leaflet has been created for the independent cinema, Cinemazy.



1. (a) Describe, giving two examples, how the graphic designer's use of contrast has enhanced the layouts. *for titles, e.g. "Coming Soon"*

2

- The reverse ~~text~~ ^{text} creates contrast which helps draw ~~the eye~~ attention to the titles
- The red & green bars in the confectionery section contrast one another for visual interest

- (b) Describe, giving two examples, how the graphic designer has created rhythm to enhance the layouts.

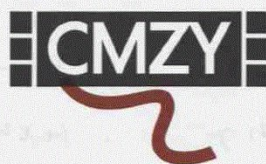
2

- The use of the alternating red & green bars create rhythm in the layout, helping ^{guide} ~~guide~~ the eye
- The repeated lenses create a rhythm while also relating to ~~the~~ the theme

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1. (continued)

The graphic designer created the logo for Cinemazy as a vector file and stored it in the cloud.



- (g) (i) Describe two advantages of creating the logo in the vector file format.

2

- It can be scaled without any pixelation
- Using specialist software the colours of the background can be changed easily

- (ii) Describe two advantages of cloud storage.

2

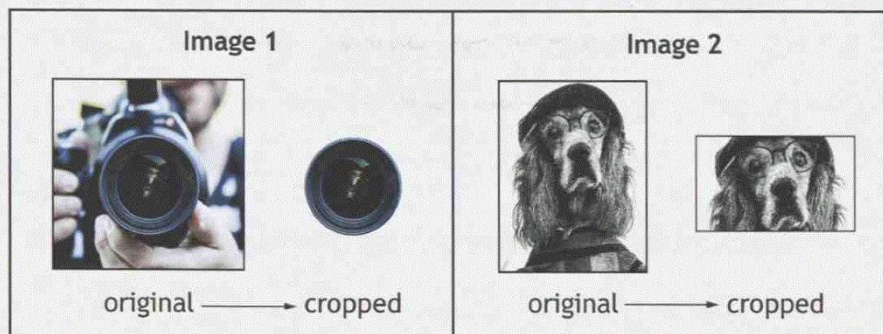
- It allows for access from anywhere, meaning ^{it} ~~can be accessed~~ ^{beneficial for} working remotely
- It's safer as having all files stored in ~~server~~ ^{cloud} means they aren't dependent on the survival of their own computers

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1. (continued)

The graphic designer has used cropping to edit the images used in the layouts.



(h) State the name of the crop applied to the images shown above.

2

(i) Image 1 full

Image 2 square

(ii) Describe the effects that the two types of cropping have created within the layouts.

2

• The square crop allows for it to fit within the space given and match the other photos' sizes

• The full crop allows for it to fit the circular shape and have the red background added

The graphic designer used placeholder text in the preliminary layouts.

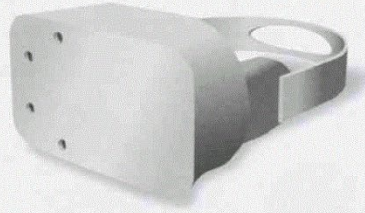
(i) Explain one advantage to the graphic designer of using placeholder text.

1

It saves the designer time they would've taken to write in the actual text manually

[Turn over

2. A tech company is developing a new virtual reality (VR) headset. A prototype is shown below.



Bottom-up modelling was used to create the VR headset components.

- (a) Describe the process of bottom-up modelling.

2

- Each part/component is modelled in separate files
- All parts are then constrained into an assembly at the end

For questions 2 (b), c (i) and c (ii), refer to the information provided on supplementary sheet 3.

- (b) Explain the purpose of the detail view D.

1

- It helps to clarify the more detailed area by zooming in so it's easier to see

- (c) (i) State the name of the type of section shown at A-A.

1

stepped section

- (ii) State the name of the type of section shown at C.

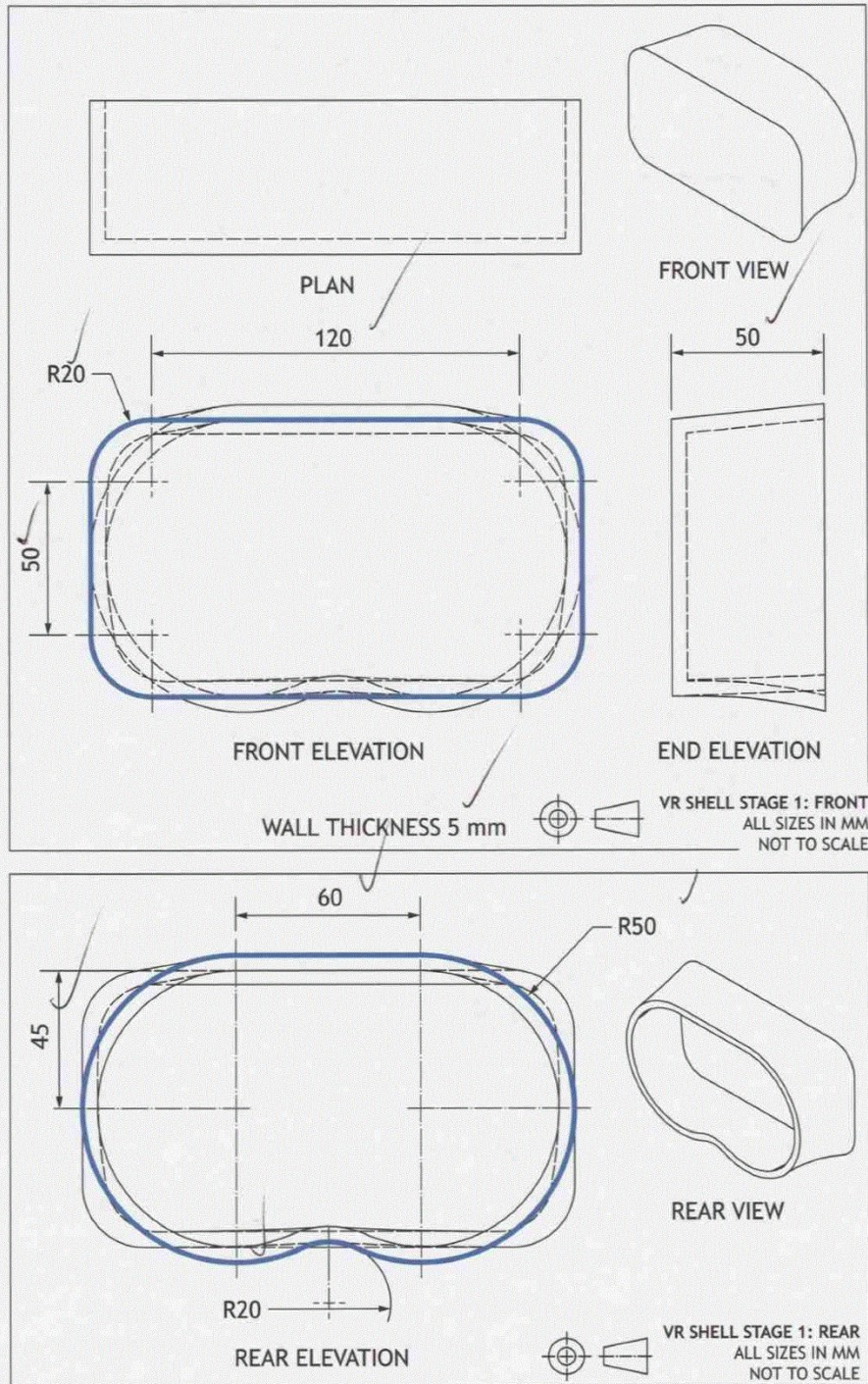
1

revolved section

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2. (continued)

Two drawings of stage 1 of the VR headset are shown below. The drawing at the top is an orthographic showing the front elevation, end elevation and plan. The second drawing is also of stage 1 of the VR headset shown from the rear to make the profile easier to see.

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2. (continued)

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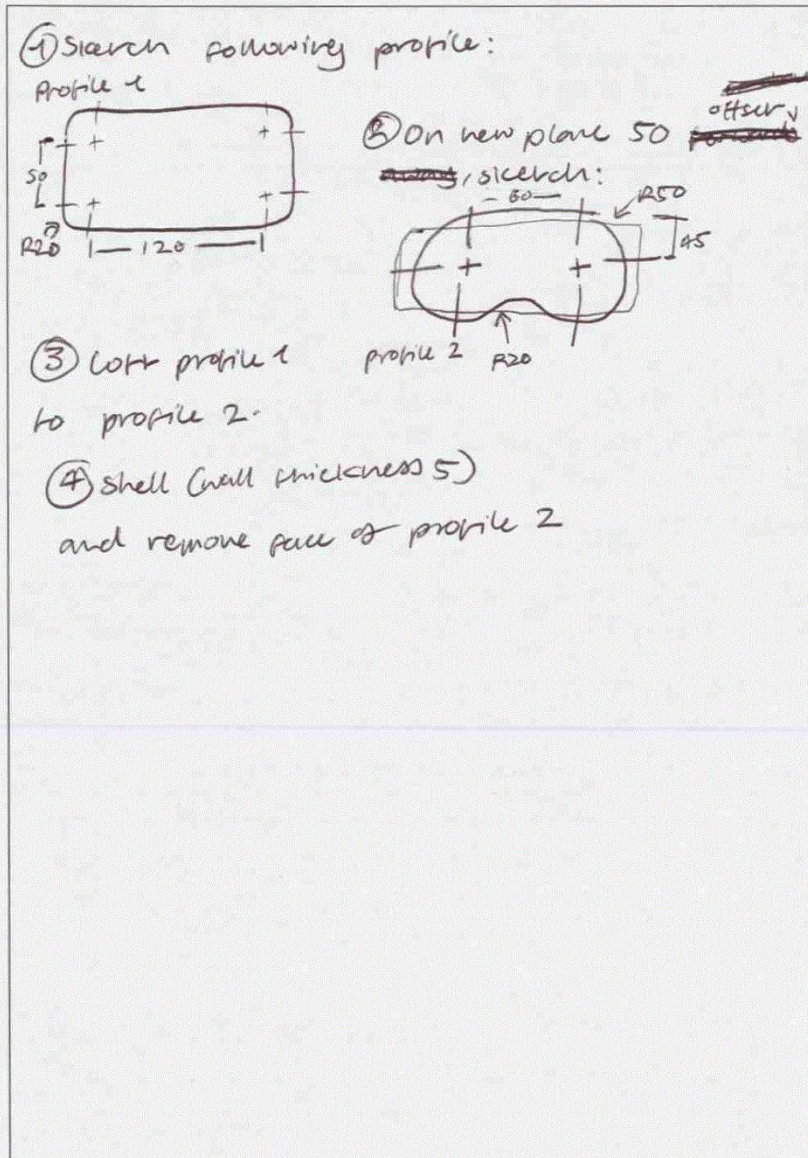
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- (d) (i) Describe the 3D CAD modelling techniques used to create stage 1 of the VR headset component, shown in the drawings opposite.

You must reference the dimensions in the drawing of the front and rear of the VR headset, shown opposite.

You may use sketches to support your answer.

5



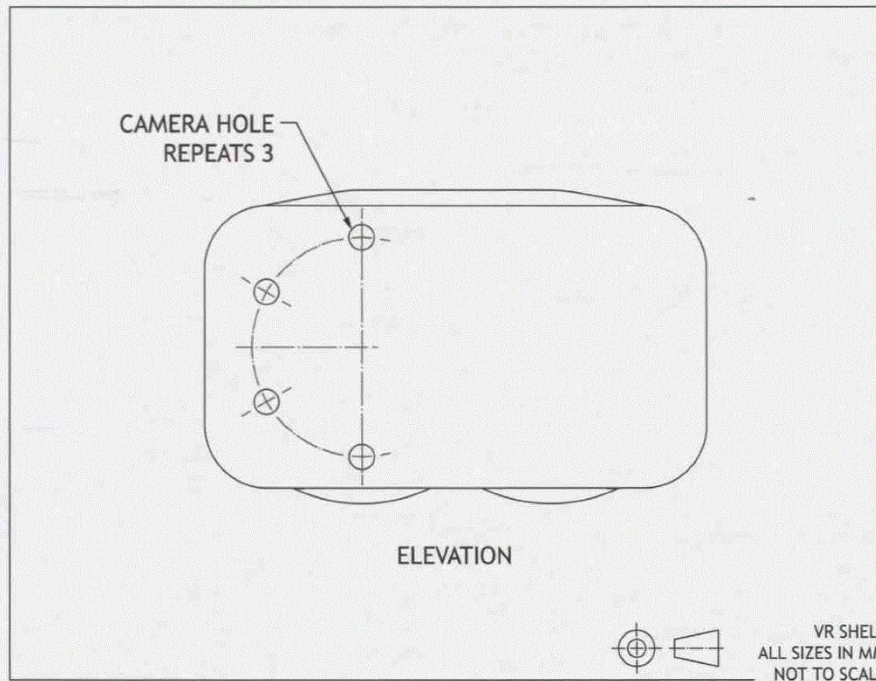
[Turn over]

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2. (d) (continued)

In stage 2, a series of camera holes were added to the VR headset.



- (ii) State the name of the 2D CAD command used to create the repeated feature in the drawing above.

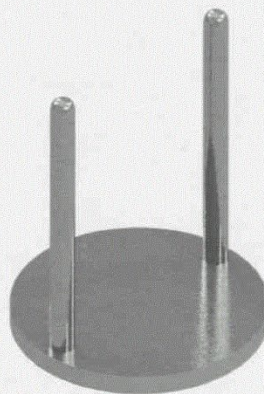
1

radial array

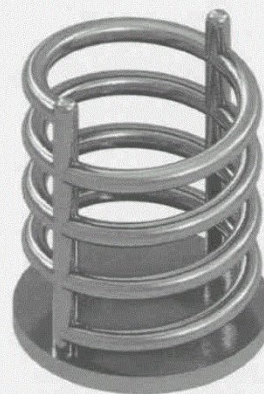
2. (continued)

A prototype for a VR controller charging stand is shown below.

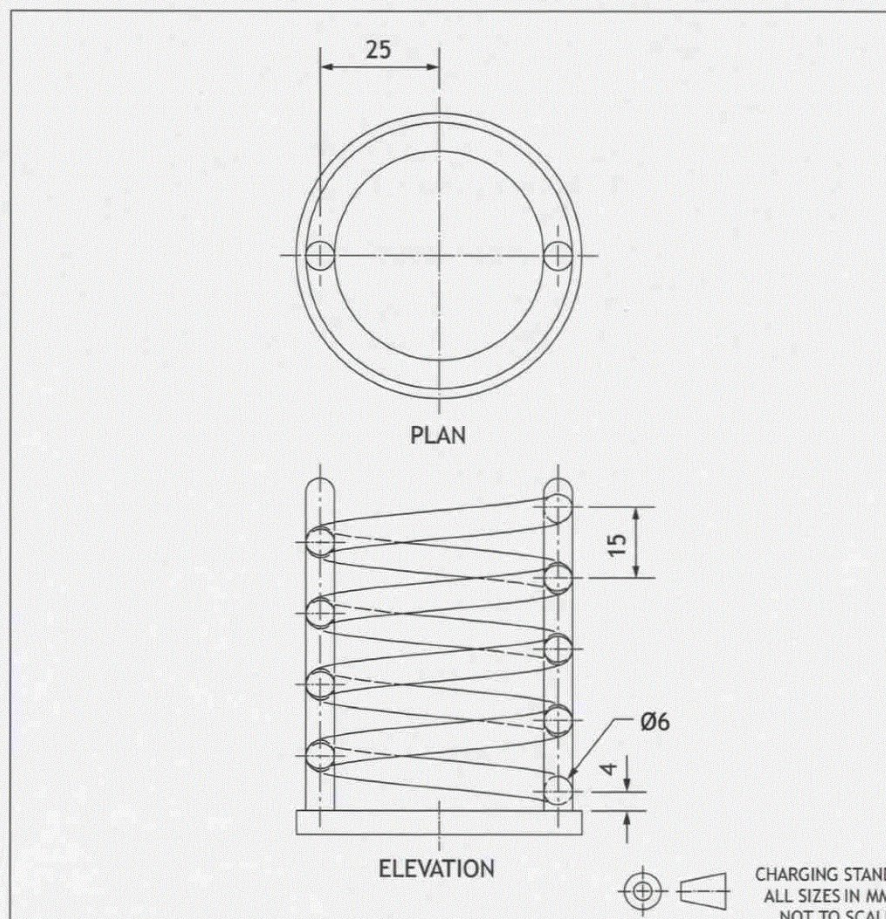
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Stage 1



Stage 2



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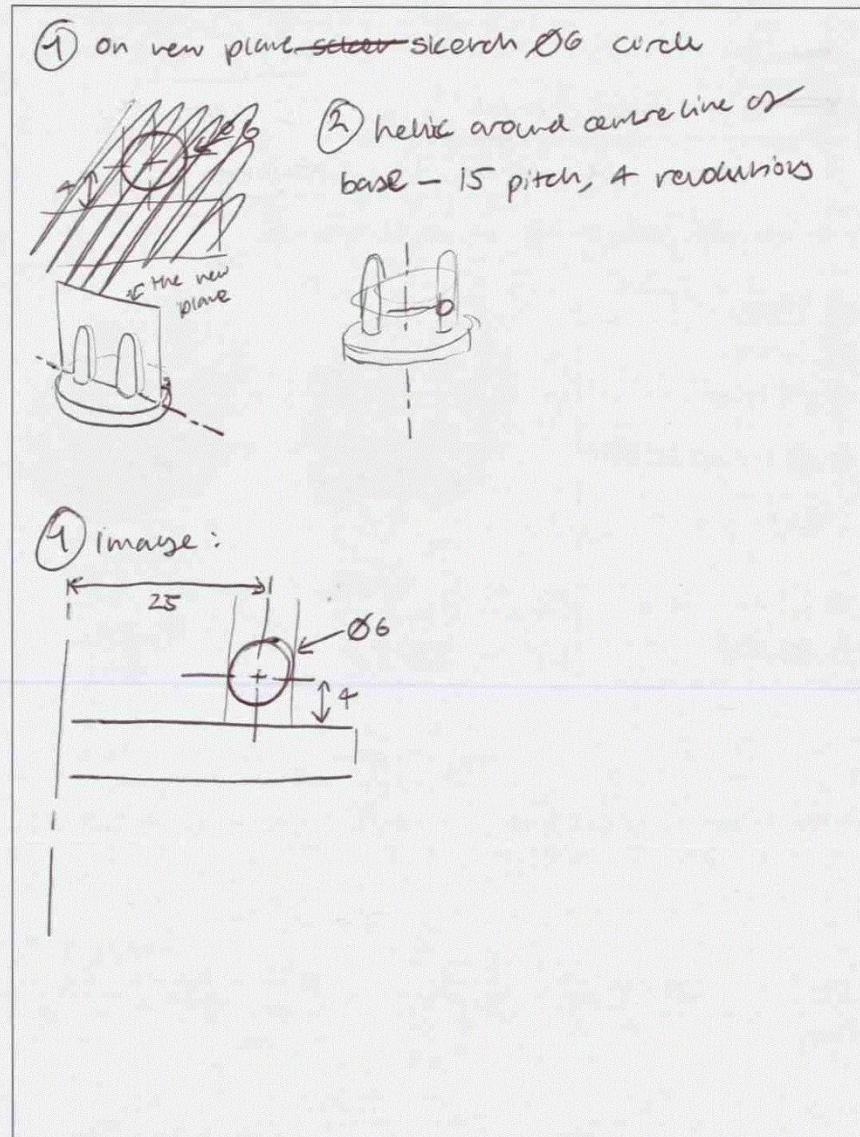
2. (continued)

- (e) Describe the 3D CAD modelling techniques used to add the feature in **Stage 2** of the prototype controller charging stand, shown opposite.

You must reference the dimensions in the drawing.

You may use sketches to support your answer.

3



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2. (continued)

The tech company hires freelance CAD technicians to create 3D models. They all use different CAD software.

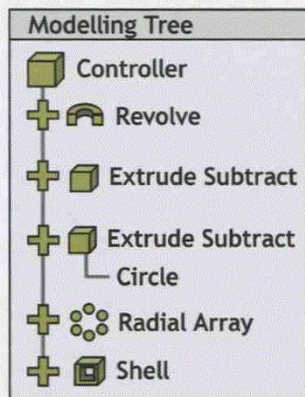
- (f) (i) State a suitable file format the CAD technicians can use to share models. 1

STEP

- (ii) Explain why using this file format is beneficial to the CAD technicians. 1

It can be opened in all CAD softwares
so it'll be usable by everyone

An error was made during the controller modelling process.



result with
modelling error

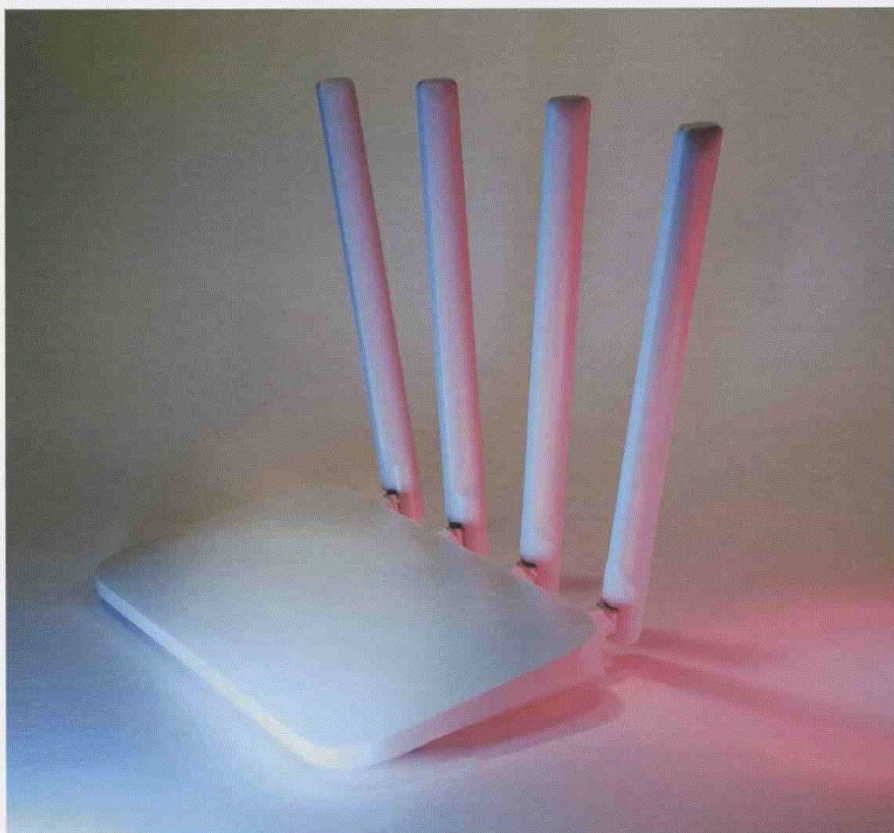


expected
end result

- (g) Describe the change that needs to be made to the modelling tree to fix the error and achieve the expected end result. 1

Shell the component before extrude subtracting
the circle

3. A wireless router is being developed using CAD.



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3. (continued)

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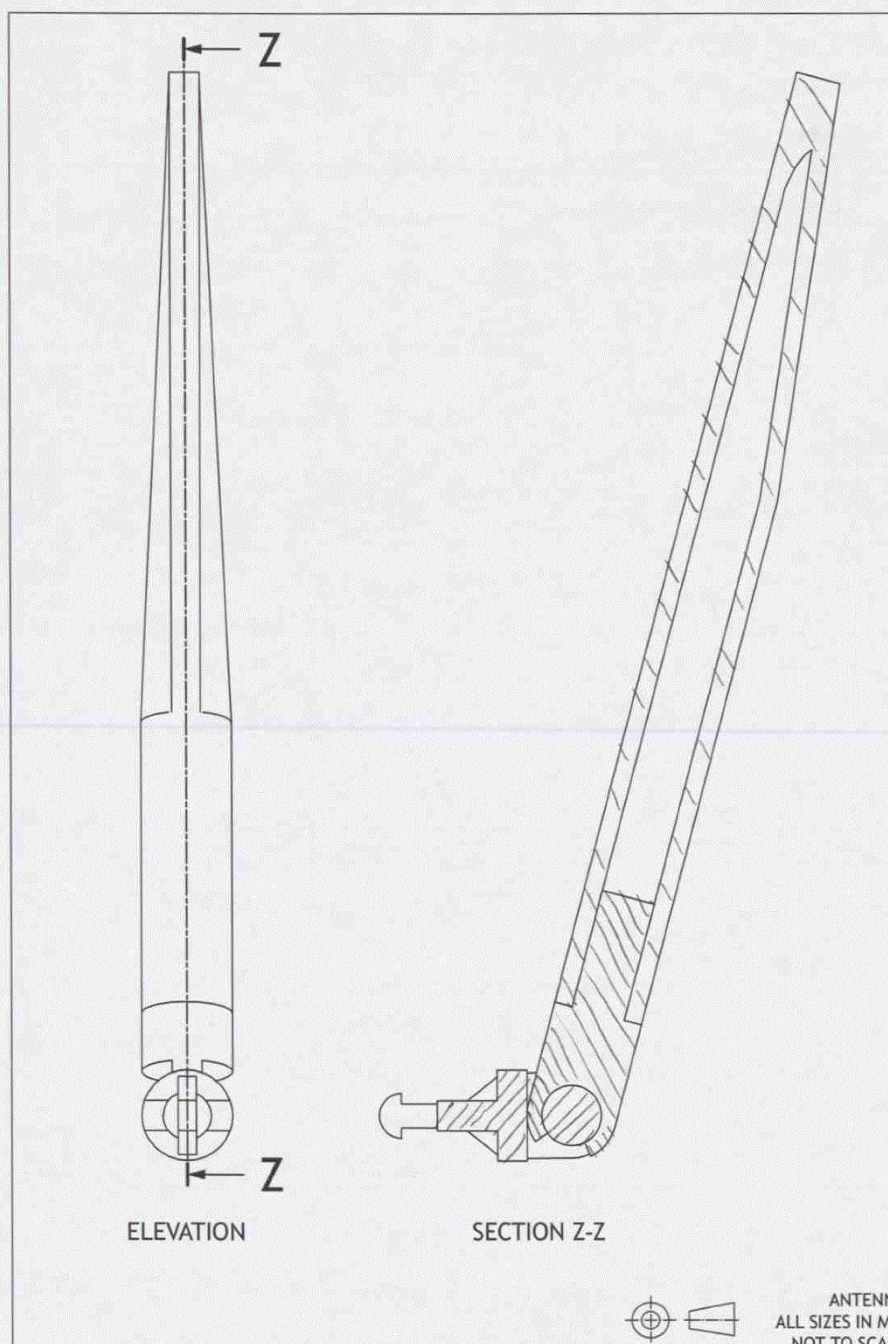
An incomplete sectional view of the wireless router antenna is shown below.

- (a) Complete the sectional view by adding appropriate hatching.

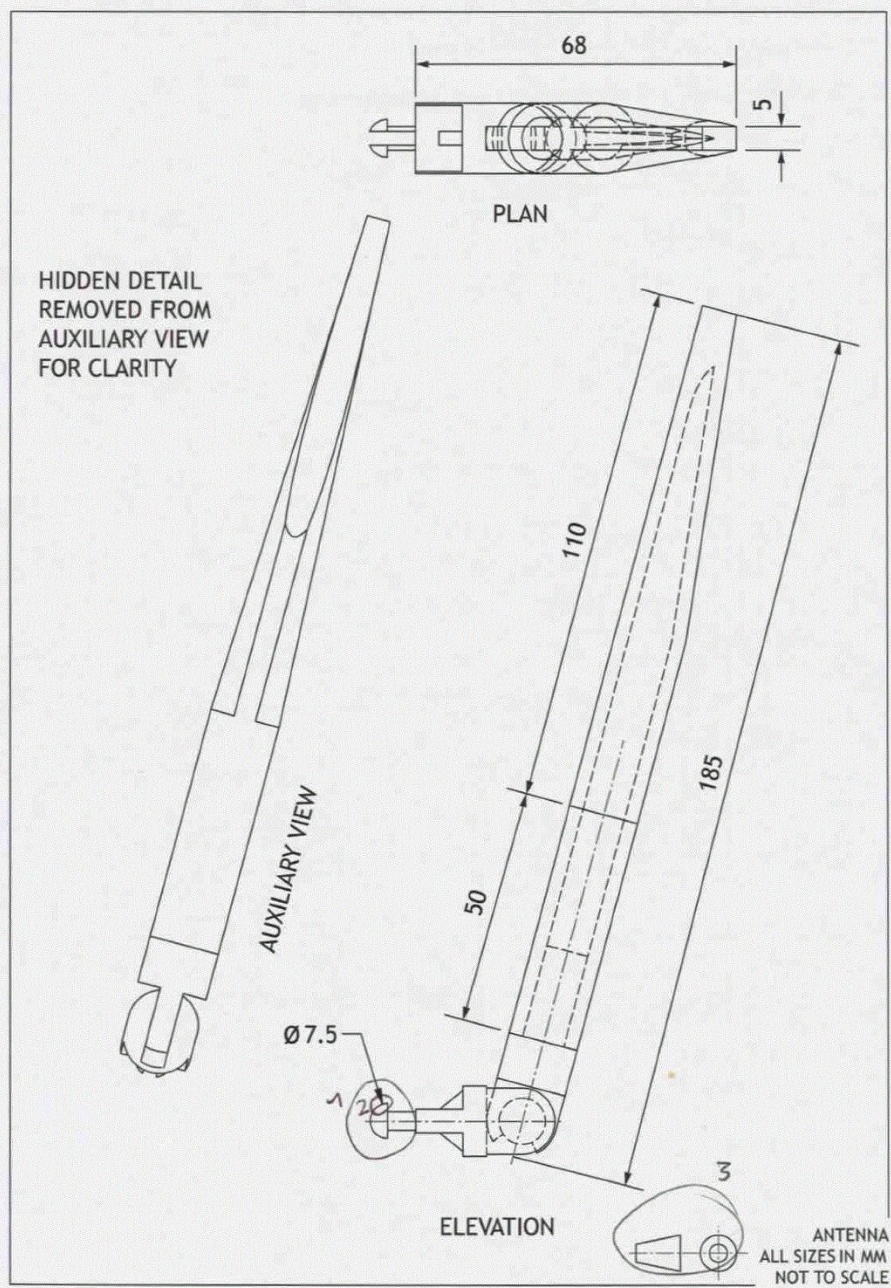
Use the information provided on **supplementary sheet 4**.

4

(Additional graphics, if required, can be found on *page 36*.)



3. (continued)

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3. (continued)

- (b) Identify **three** errors which are not correct to British Standard conventions in the drawing of the antenna, shown opposite.

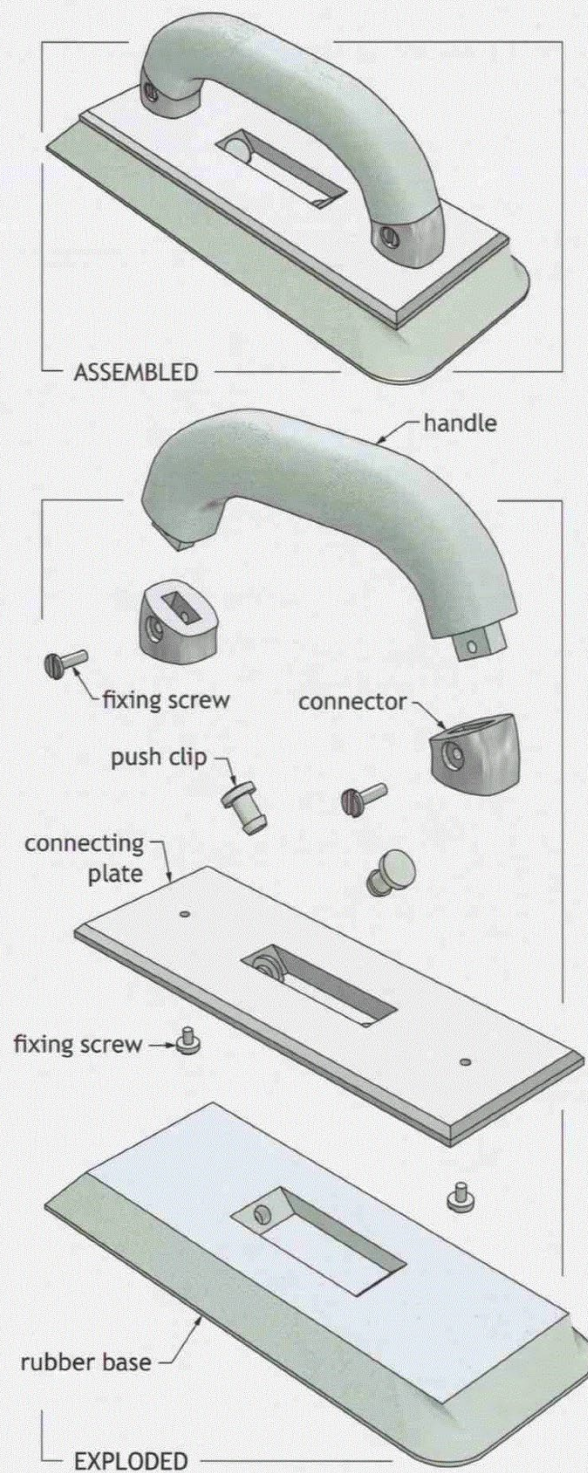
3

- 1 Used a diameter dimension for a half circle (should be a radius)
- 2 No gap between arrowhead and drawing
- 3 Wrong projection ^{symbol} ~~type should be 3rd not 1st~~

[Turn over]

4. A tiling company has produced the assembled and exploded view of a grout float shown below.

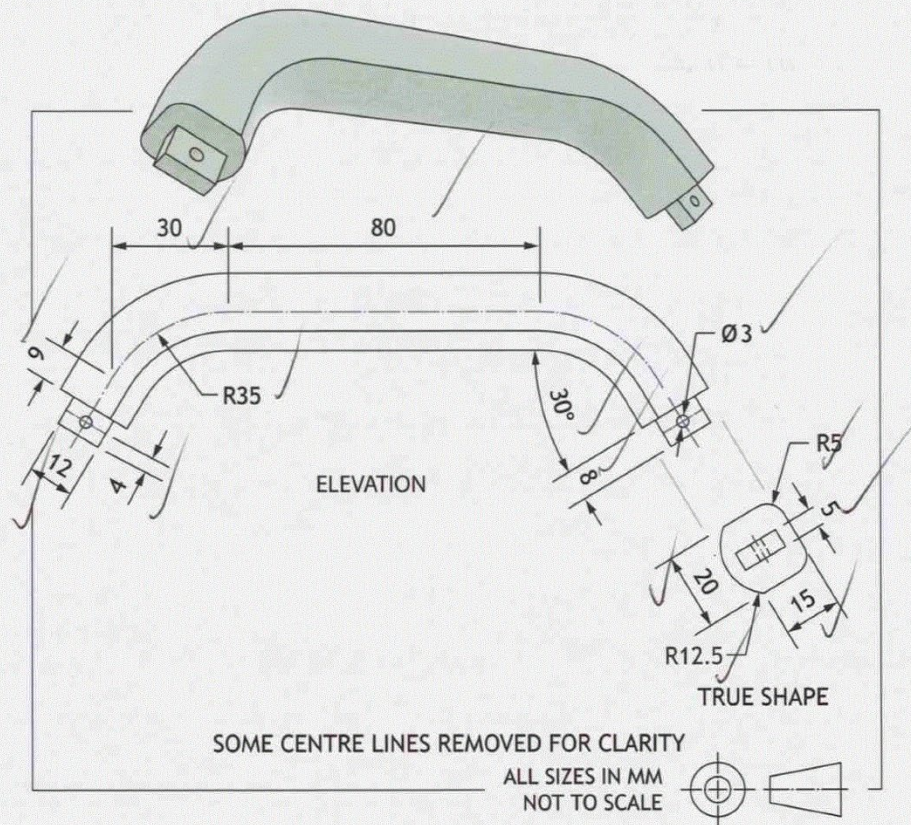
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4. (continued)		
(a) (i) Describe two examples of good practice in the exploded view.	2	
• All parts have even spacing and don't overlap		
• All exploded in direction of assembly		
(ii) Describe, giving two examples, the purpose of an exploded view.	2	
• It shows the number of parts required for the item		
• It shows all the parts in proportion to one another, showing scale		
		[Turn over]

4. (continued)

An orthographic drawing of the handle component is shown below.



4. (continued)

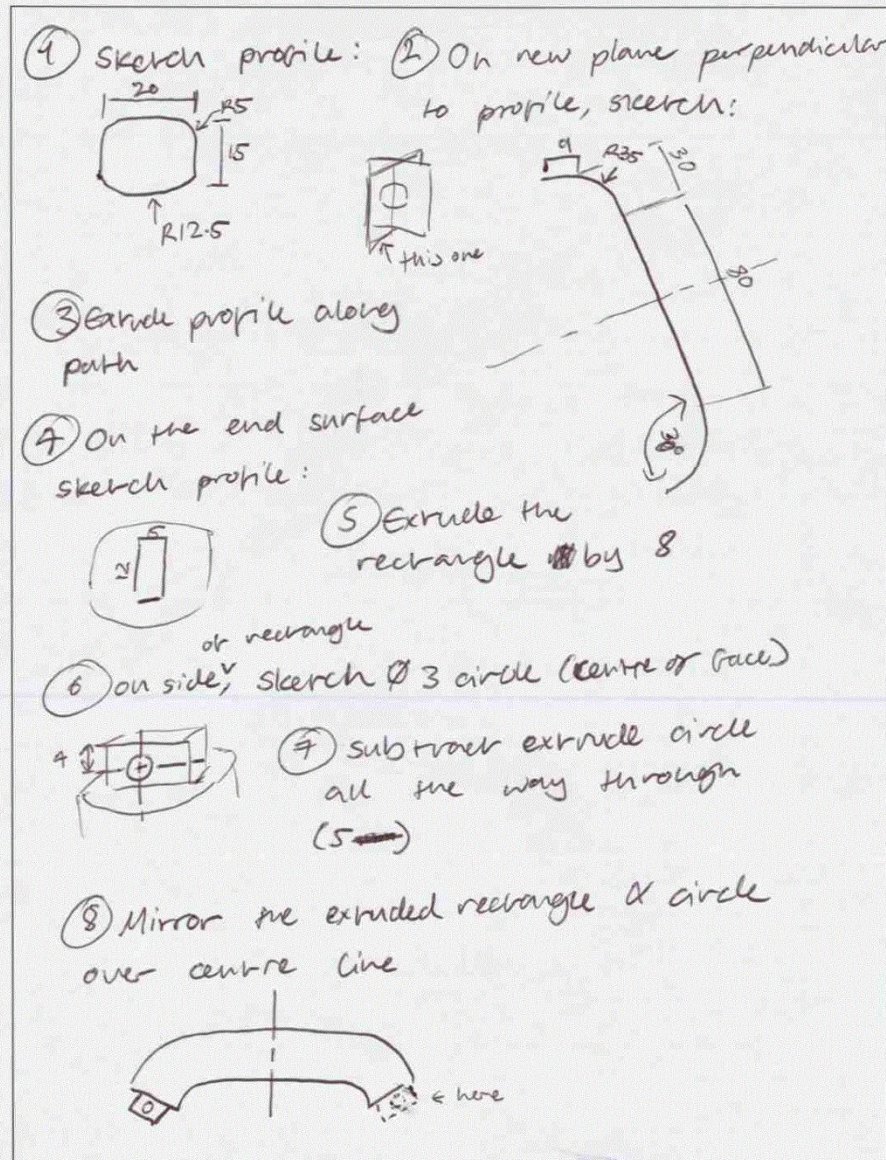
- (b) Describe the 3D CAD modelling techniques used to model the handle component, shown opposite.

You must refer to the dimensions given in the drawing.

You may use sketches to support your answer.

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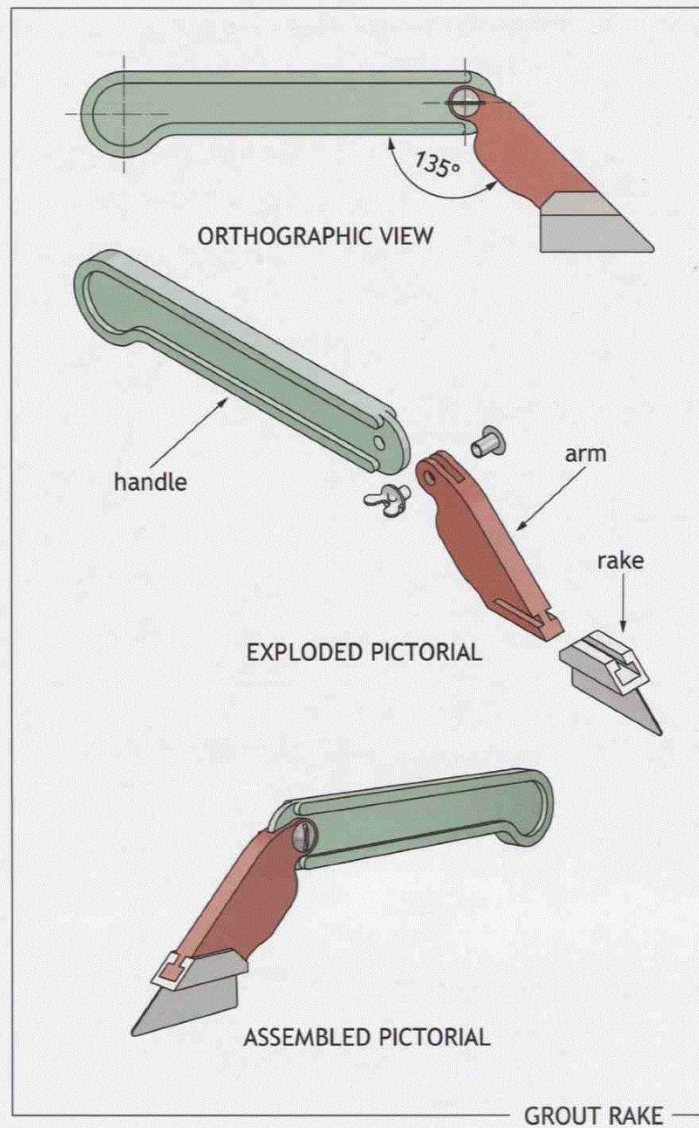
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4. (continued)

Graphics for a grout rake are shown below.



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4. (continued)

MARKS

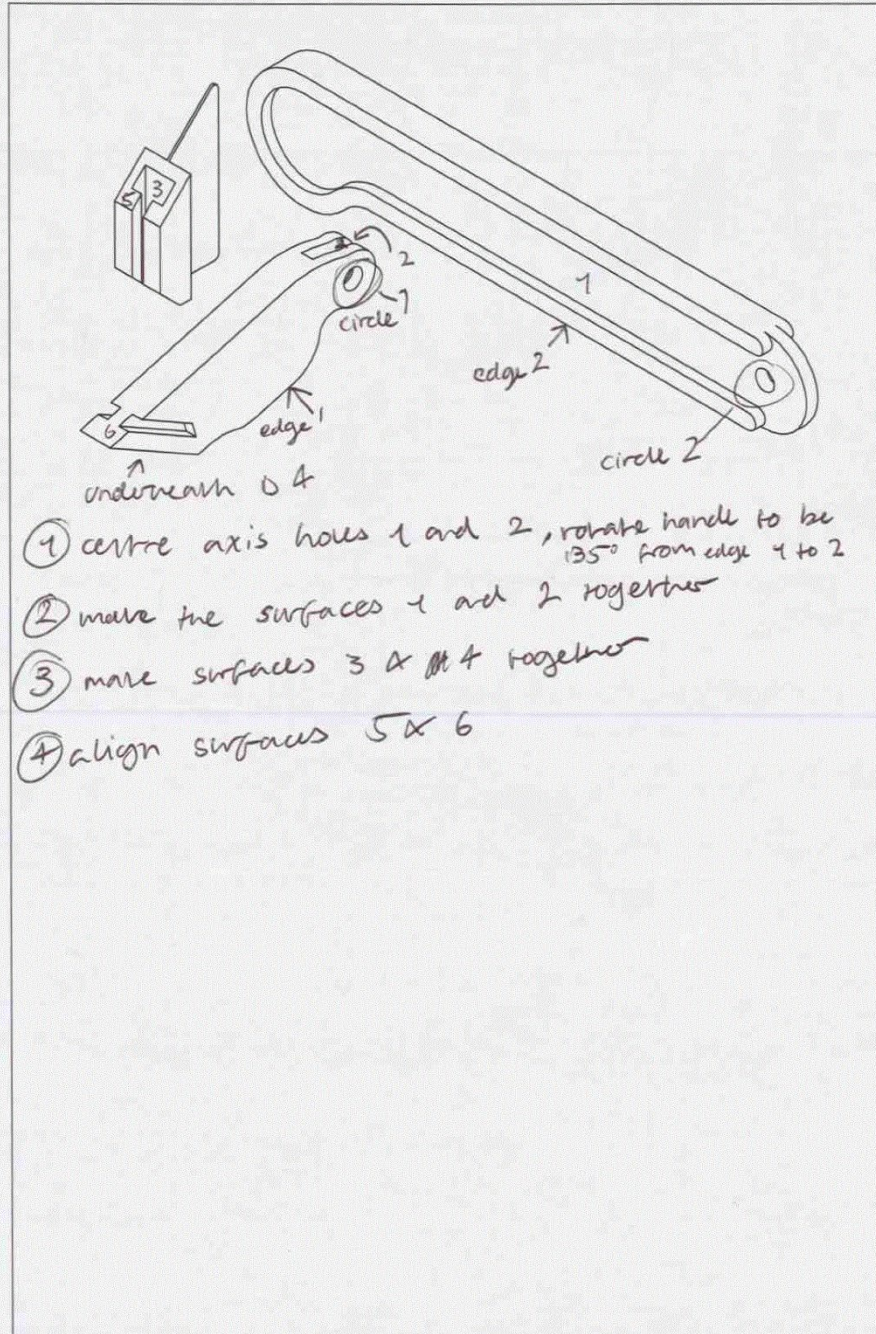
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- (c) Describe, using 3D CAD terms, how to constrain the three grout rake components, shown below.

You must constrain the arm and rake at a 135° angle to each other, as shown opposite.

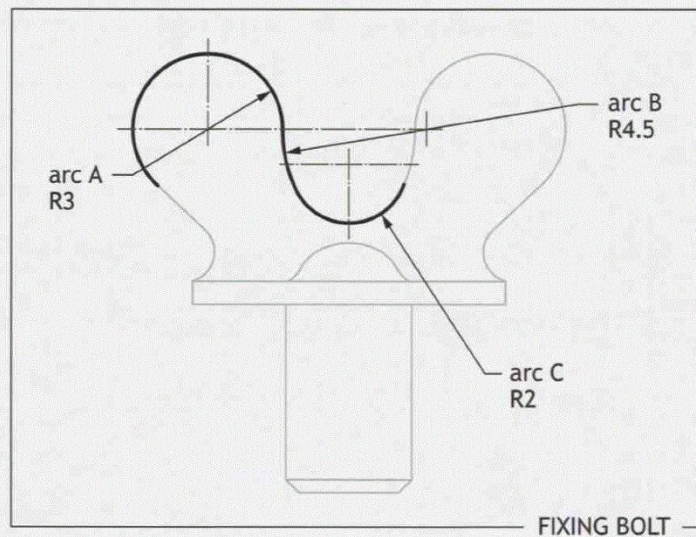
You may annotate the drawings and use sketches to support your answer.

4



4. (continued)

The fixing bolt component was modelled using tangency.



(d) Using the principles of tangency:

- (i) calculate the distance from the centre of arc A to the centre of arc B

1

7.5

- (ii) calculate the distance from the centre of arc B to the centre of arc C.

1

2.5

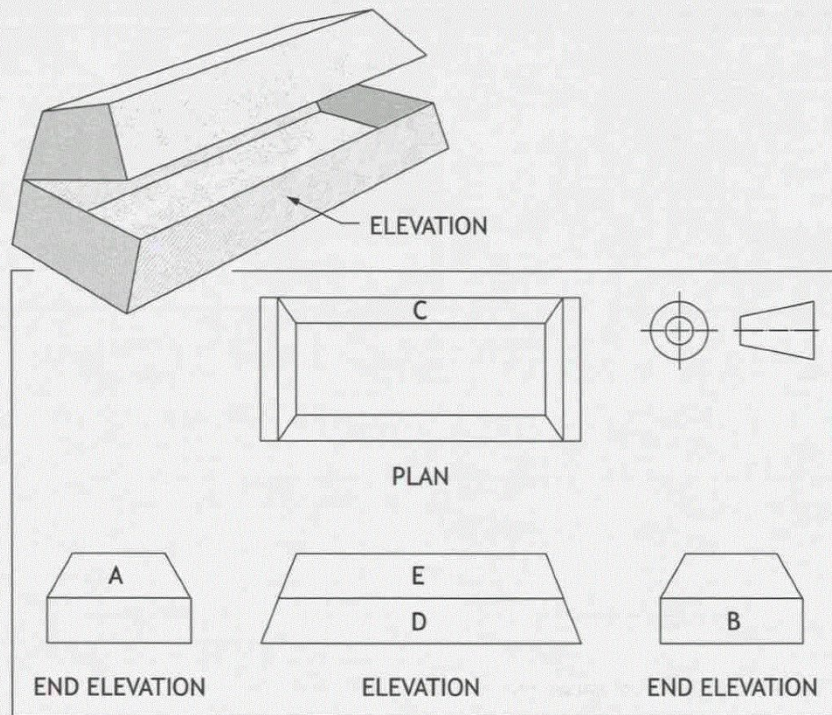
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4. (continued)

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Graphics for proposed packaging for the grout rake are shown below.

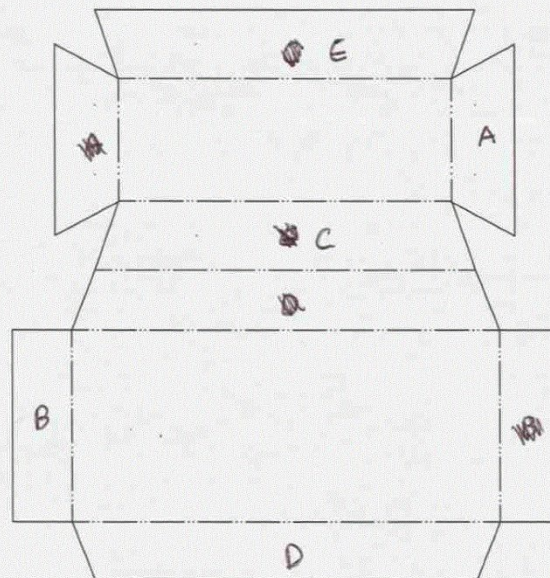


- (e) Identify the position of faces A–E on the surface development below.

The surface development is shown from the outside.

(An additional graphic, if required, can be found on *page 37*.)

5



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4. (continued)

Illustrations of the grout rake are shown below.

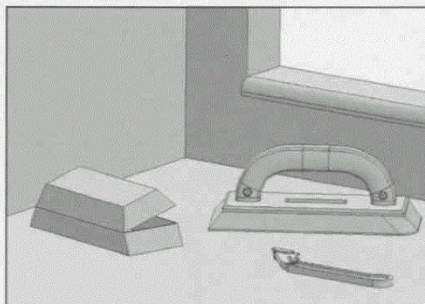


Illustration 1

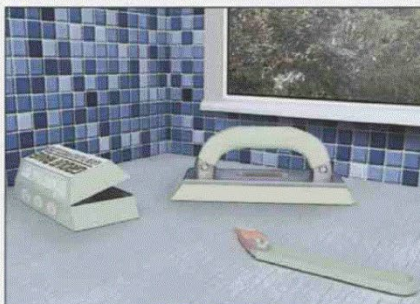


Illustration 2

- (f) Describe two 3D rendering techniques applied to produce the graphic shown in Illustration 2.

2

- Materials have been applied to the assemblies (e.g. metal)
- Shadows have also been applied to show depth

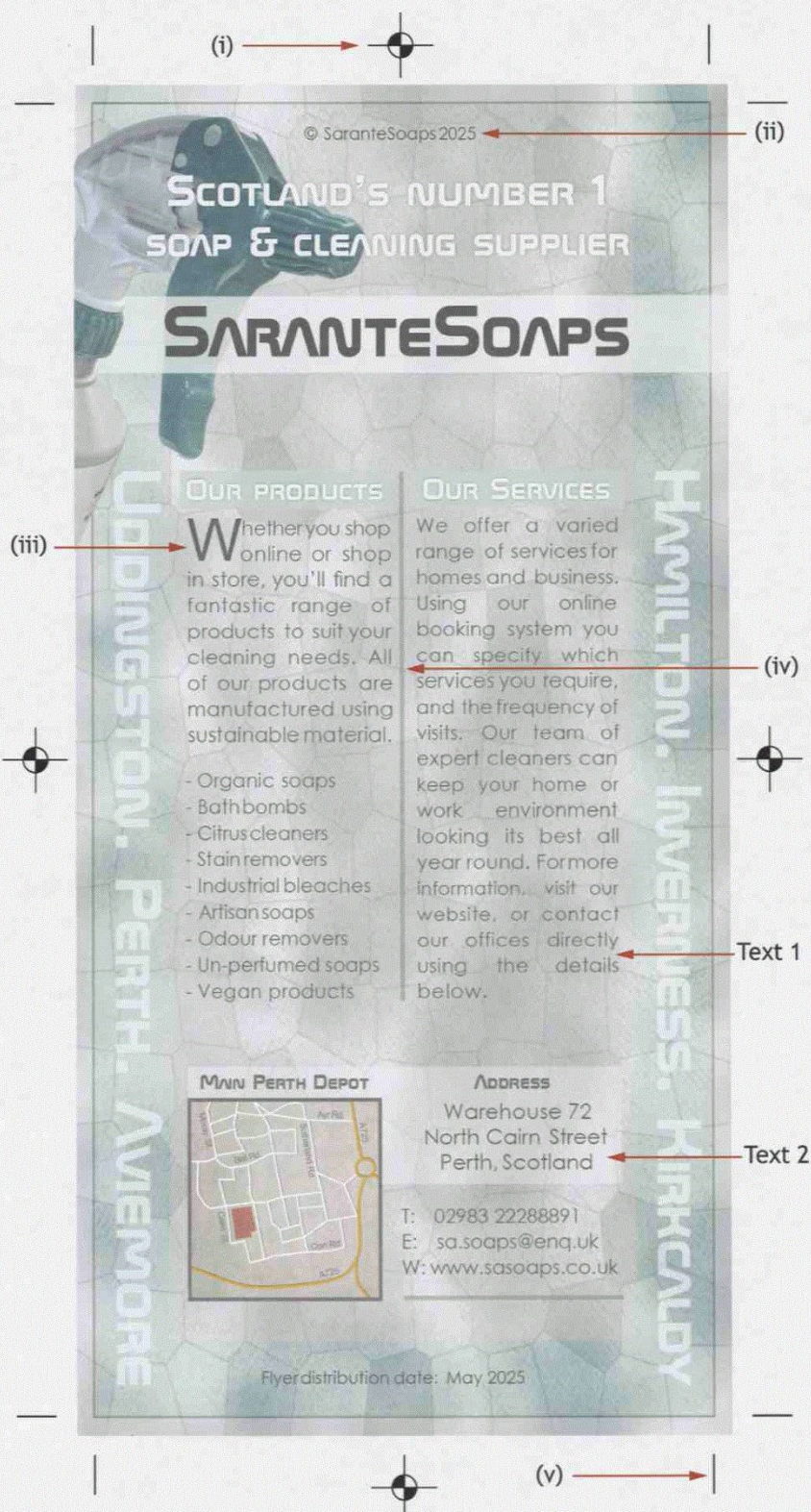
- (g) Describe, giving two examples, how the use of a sited environment can improve an illustration.

2

- It gives a sense of scale to the object
- It allows the object to be viewed in different weather/lighting conditions

5. A flyer for a soap company is shown below.

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5. (continued)			
(a)	State the name of the desktop publishing symbols and techniques labelled on the flyer shown opposite.		
(i)	registration mark	1	
(ii)	watermark header	1	
(iii)	drop capital	1	
(iv)	column rule	1	
(v)	crop mark	1	
(b)	State the two different types of text justification labelled on the flyer shown opposite.	2	
	Text 1 fully justified		
	Text 2 centre justified		
(c)	Describe the benefit of using the desktop publishing technique bleed in the flyer.	1	
	It means there's no white rim around the piecey making it look fuller		
[Turn over]			

5. (continued)

A digital version of the flyer was produced, shown below.



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- (f) Explain **two** benefits to consumers of accessing desktop published media digitally.

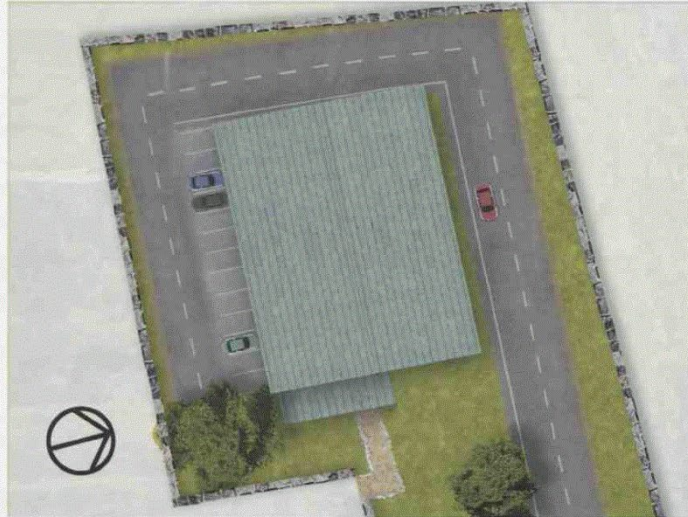
2

- It's more accessible with things like ^{text}~~image~~ - to-speech being featured
- It's easier to read thanks to zoom & adjustable brightness

[Turn over

5. (continued)

A CAD technician produced a site plan of the soap company's main depot.



site plan

- (g) Describe, giving four examples, the information that the site plan communicates about the depot.

4

- It shows the direction it's facing (seen by the north point)
- It shows the ^{trees} ~~area~~ that are present
- It ~~gives a sense of~~ ^{shows} the materials of the building & surroundings
- It shows the boundaries of the area

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5. (continued)

A floor plan of the main depot was also produced. The graphic featured a range of British Standard symbols. Two are shown below.



symbol A



symbol B

(h) State the name of symbols A and B.

2

(i) Symbol A radiator

Symbol B ~~boiler~~ boiler

(ii) Describe, giving **two** examples, how a CAD library would be useful for the CAD technician when producing the floor plan.

2

• It saves the technician time spent potentially
modelling parts themselves

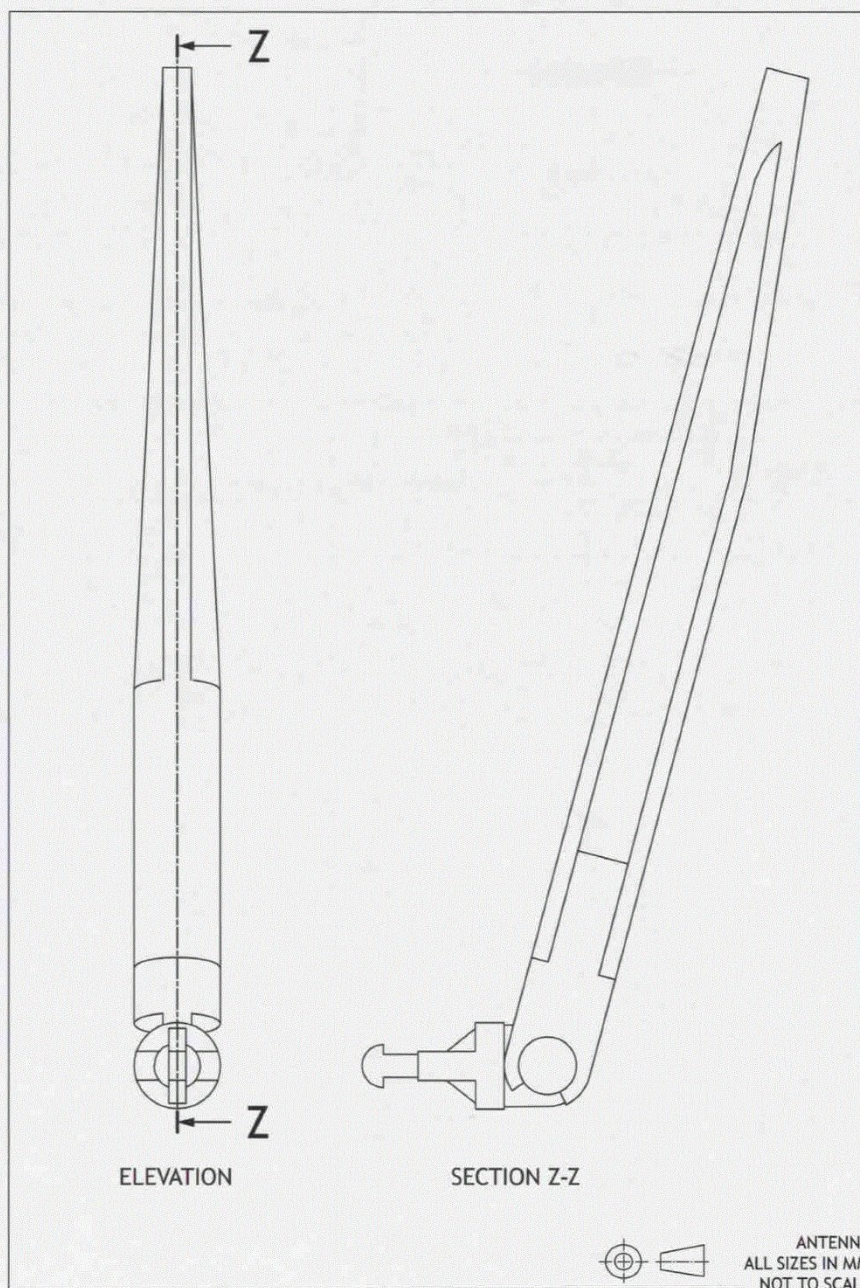
• It means the options they've chosen are
standardized and easy to find in real life

[END OF QUESTION PAPER]

ADDITIONAL SPACE FOR ANSWERS

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Additional graphics for question 3 (a)



ADDITIONAL SPACE FOR ANSWERS

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Additional graphic for question 4 (e)

