



FOR OFFICIAL USE

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National  
Qualifications  
2025

Mark

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**X835/75/01**

**Graphic Communication**

WEDNESDAY, 30 APRIL

1:00 PM – 3:00 PM



\* X 8 3 5 7 5 0 1 \*

Fill in these boxes and read what is printed below.

Full name of centre

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Town

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Forename(s)

--

Surname

--

Number of seat

--

Date of birth

Day

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Month

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Year

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Scottish candidate number

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**Total marks — 80**

Attempt ALL questions.

**You may use a calculator.**

All dimensions are in mm.

All technical sketches and drawings use third angle projection.

You may use rulers, compasses or trammels for measuring.

In all questions you may use sketches and annotations to support your answer if you wish.

Write your answers clearly in the spaces provided in this booklet. Additional space for answers is provided at the end of this booklet. If you use this space you must clearly identify the question number you are attempting.

Use **blue** or **black** ink.

Before leaving the examination room you must give this booklet to the Invigilator; if you do not, you may lose all the marks for this paper.



\* X 8 3 5 7 5 0 1 0 1 \*

Total marks — 80  
Attempt ALL questions

1. A graphic designer created a range of promotional graphics for Roadside Reels, a drive-in movie theatre company.

A ticket for the drive-in movie theatre is shown below.



- (a) Describe **two** ways the graphic designer has used the following design elements and principles to enhance the ticket.

(i) Contrast \_\_\_\_\_ 2

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(ii) Alignment \_\_\_\_\_ 2

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1. (a) (continued)

(iii) Unity \_\_\_\_\_

2

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[Turn over



1. (continued)

The graphic designer produced the car bumper sticker shown below.



- (b) Describe **one** way the graphic designer has used dominance to enhance the layout of the car bumper sticker.

1

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- (c) Roadside Reels publish movie times on their website.  
Describe **two** advantages of publishing the **movie times** on their website, rather than physically printing the information.

2

**Do not refer to environmental advantages in your answer.**

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1. (continued)

Roadside Reels provide 3D glasses for some movies. Orthographic views of the glasses are shown below.



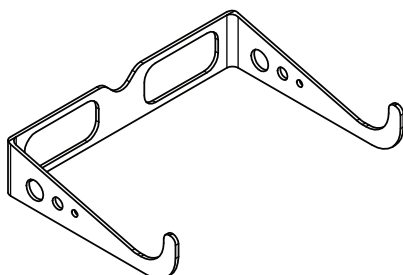
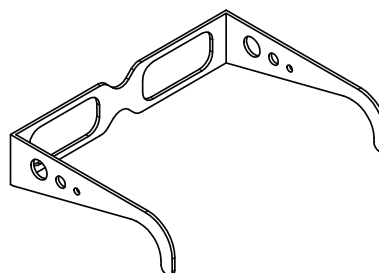
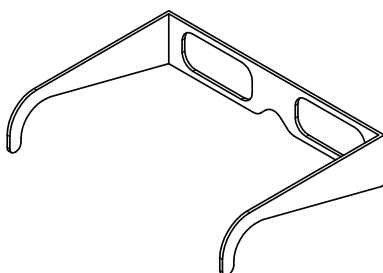
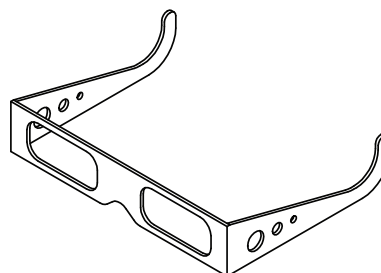
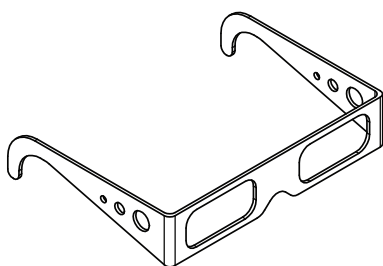
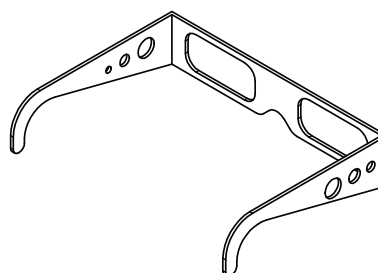
ELEVATION



END ELEVATION

(d) Identify the correct pictorial views by ticking (✓) two boxes below.

2


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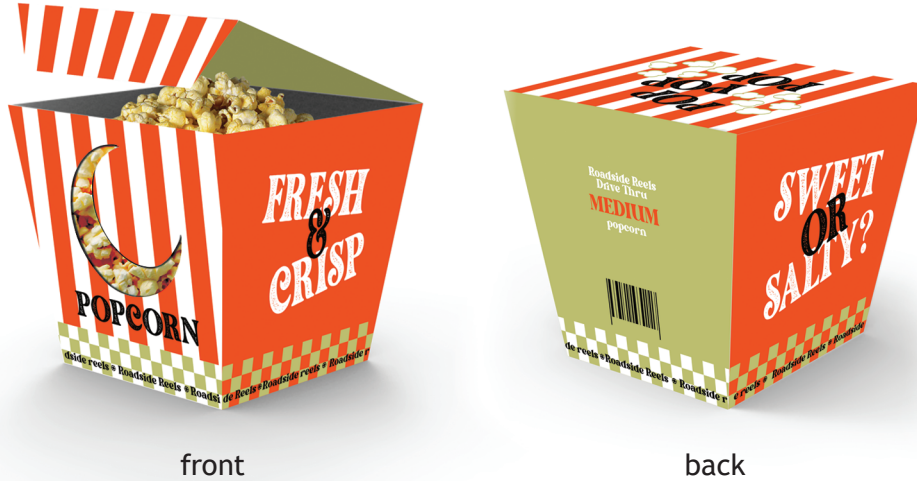
[Turn over



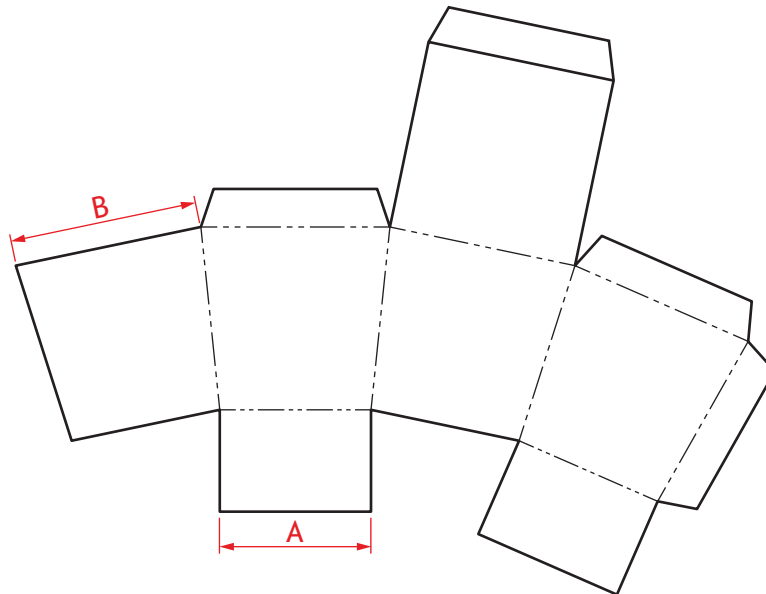
## 1. (continued)

Roadside Reels sells popcorn to customers in branded packaging.

3D CAD illustrations and a surface development of the packaging are shown below.



3D CAD illustrations



SURFACE DEVELOPMENT

NOTE: Surface Development shows the outside of the packaging.



1. (continued)

- (e) The surface development of the packaging has been produced to a scale of 1:5.

Calculate the full size of measurements A and B from the surface development.

Use a ruler to measure.

(i) Measurement A \_\_\_\_\_ mm

1

(ii) Measurement B \_\_\_\_\_ mm

1

- (f) Identify on the surface development on **page 06**, where the following details should be placed.

Use the 3D CAD illustrations to help with your answers.

- (i) The moon shaped cut-out.

1

Use 'M' to identify the position of the cut-out.

- (ii) The 'Sweet or Salty' text.

1

Use 'S' to identify the position of the text.

Roadside Reels have made the popcorn packaging as small as possible to reduce its impact on the environment.

- (g) Describe **two** other ways the environmental impact of the packaging could be reduced.

2

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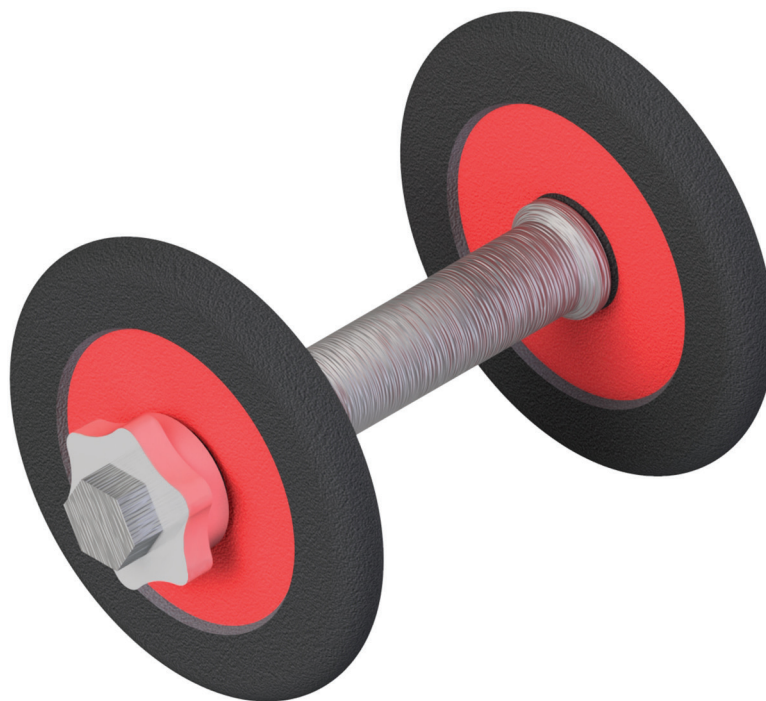


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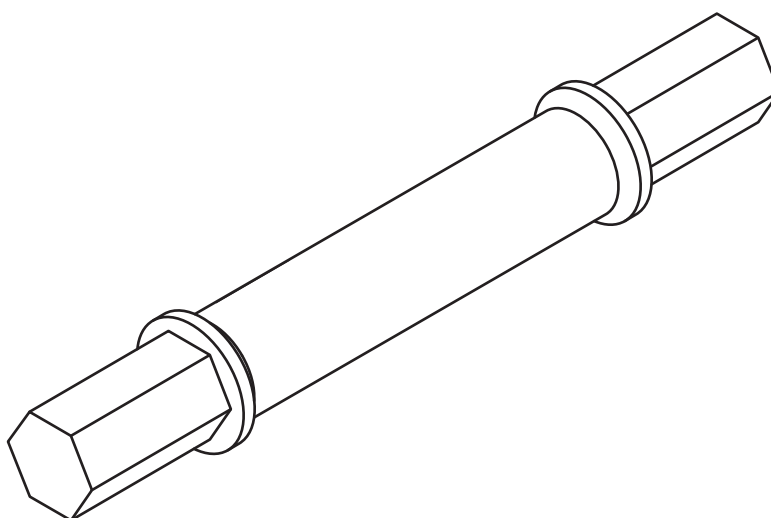
[Turn over



2. A 3D CAD rendered pictorial of a dumbbell is shown below.



A pictorial view of the handle is shown below.



- (a) State the name of the pictorial view.

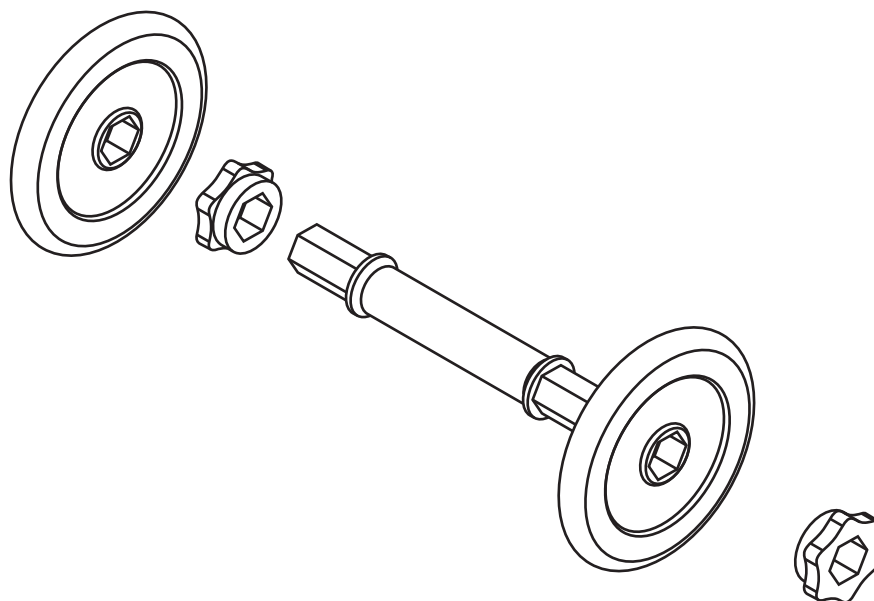
1

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2. (continued)

An exploded pictorial line drawing of the dumbbell is shown below.



- (b) Describe **two** examples of poor practice that have been applied to the exploded pictorial drawing.

2

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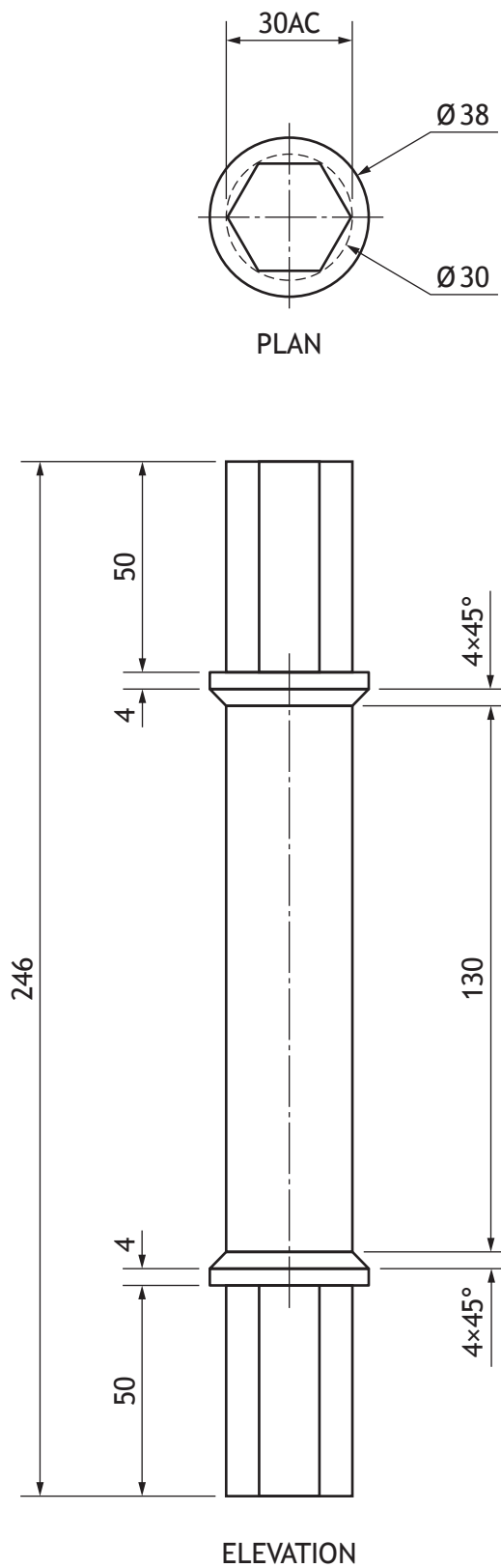
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## 2. (continued)

An orthographic drawing of the handle is shown below.



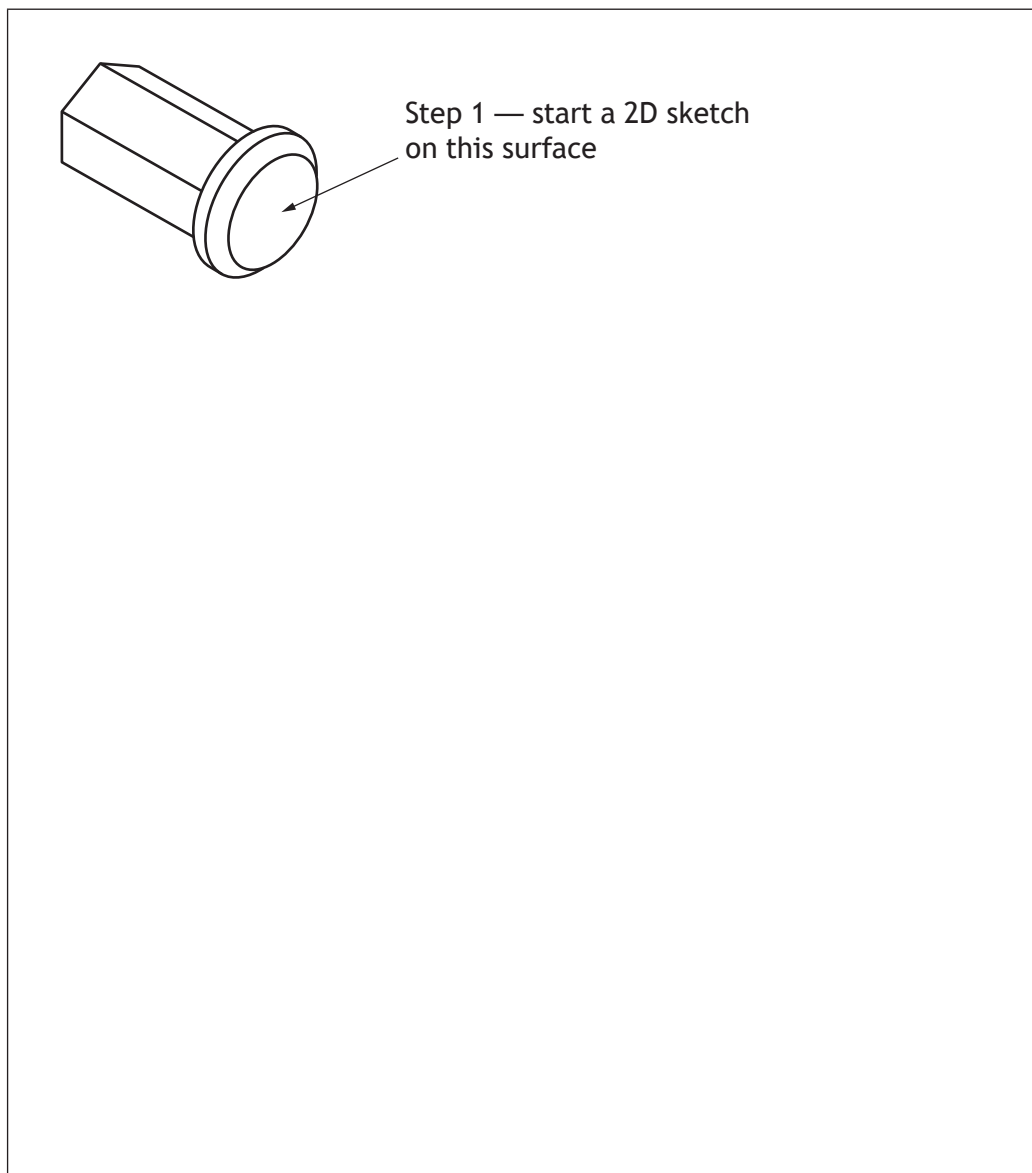
2. (continued)

- (c) The incomplete 3D CAD model of the handle is shown below.

Describe, using the correct dimensions and 3D CAD modelling terms, how the remaining features of the handle would be produced.

You may use sketches to support your answer.

4

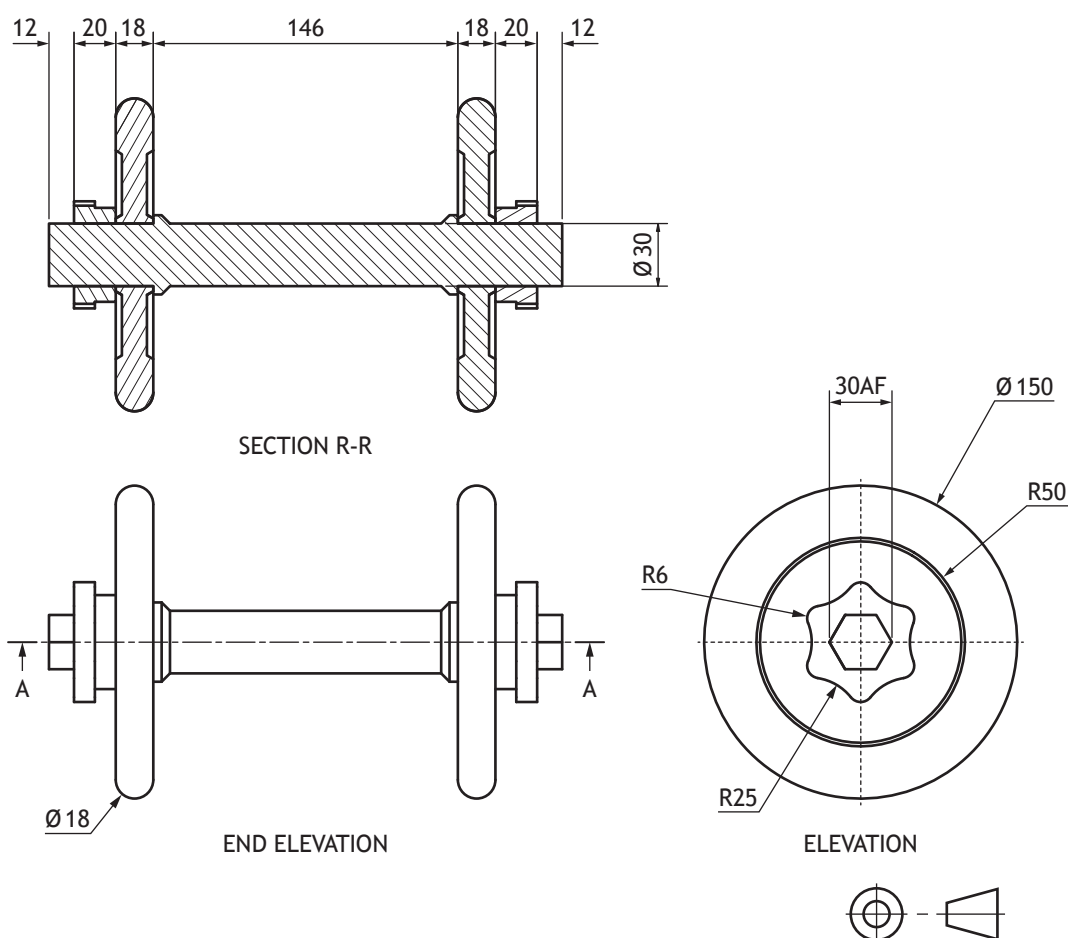


[Turn over



2. (continued)

An orthographic drawing of the dumbbell assembly is shown below.



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

(d) Identify six errors in the orthographic drawing.

You may annotate the drawing to support your answer.

6

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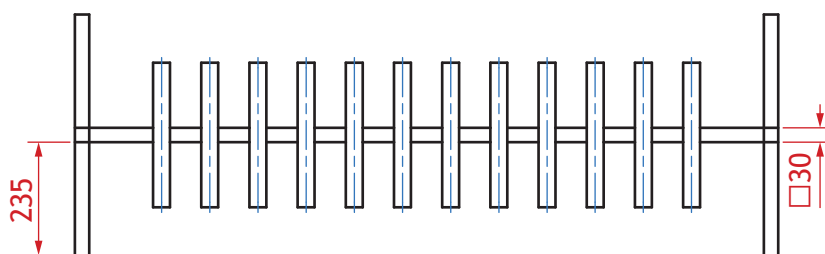




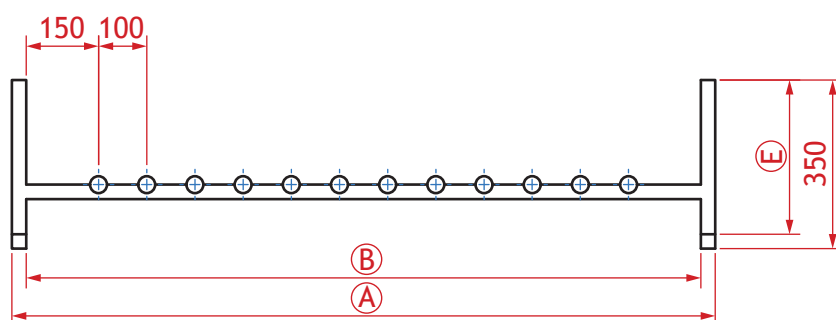
2. (continued)

MARKS DO NOT WRITE IN THIS MARGIN

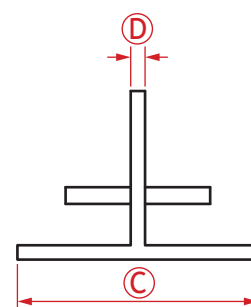
A 3D CAD illustration and orthographic drawing of the dumbbell storage rack are shown below.



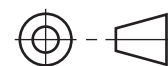
PLAN



ELEVATION



END ELEVATION



(e) Calculate the sizes circled on the orthographic drawing.

- |                  |   |
|------------------|---|
| (i) A _____ mm   | 1 |
| (ii) B _____ mm  | 1 |
| (iii) C _____ mm | 1 |
| (iv) D _____ mm  | 1 |
| (v) E _____ mm   | 1 |



3. A housing developer uses different types of graphics — preliminary, production, and promotional — when designing new homes.

(a) (i) State the name of the type of graphic shown below.

1



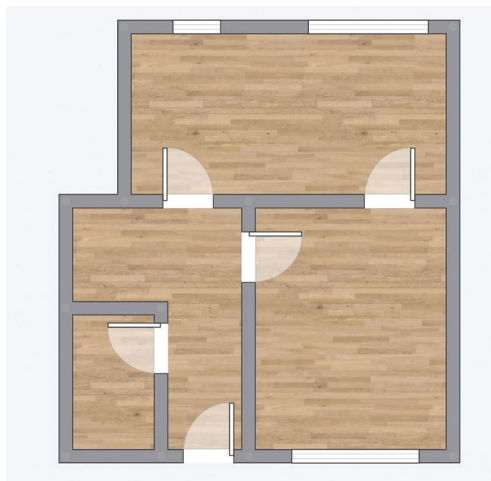
(ii) Explain, giving one reason, why this type of graphic is used.

1



3. (continued)

The floor plan for a new house design, shown below, was produced by a team of architects.



(b) State a suitable scale for this type of plan.

1

\_\_\_\_\_

(c) State the names of the building symbols that can be added to the floor plan.

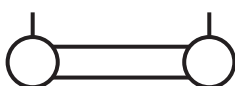
(i)



\_\_\_\_\_

1

(ii)



\_\_\_\_\_

1

(iii)



\_\_\_\_\_

1

(iv)



\_\_\_\_\_

1

(v)



\_\_\_\_\_

1



3. (continued)

- (d) The building symbols are stored in a CAD library.

Describe **two** advantages of using a CAD library.

2

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- (e) Remote working was used during the production of the floor plan.

Describe **two** advantages to the team of architects of remote working.

2

**Do not refer to environmental advantages in your answer.**

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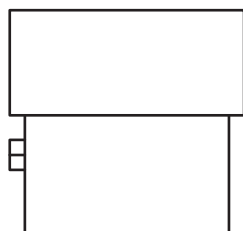
[Turn over for next question

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3. (continued)

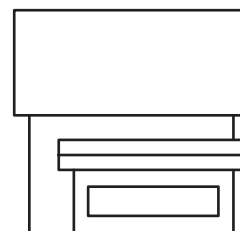
The architects created 3D CAD models of the house design. Orthographic drawings of the 3D CAD models are shown below.



END ELEVATION



ELEVATION

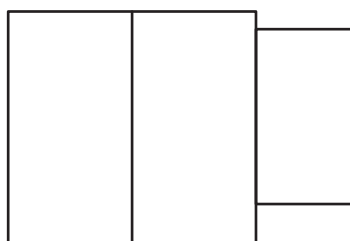
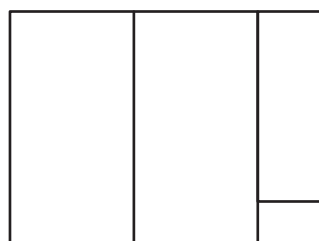
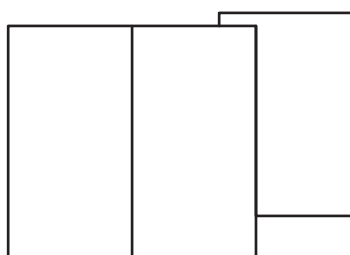
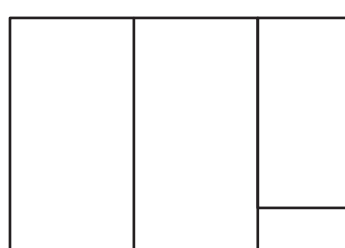


END ELEVATION

- (f) (i) Identify the correct plan by ticking (✓) a box below.

1

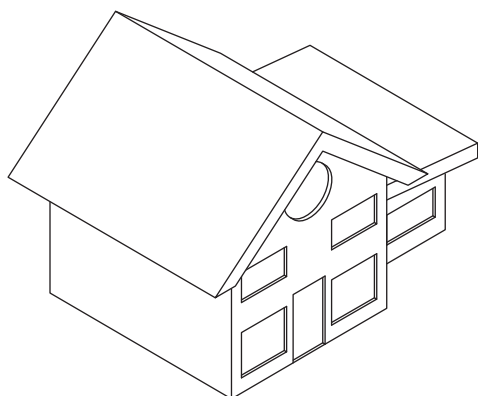
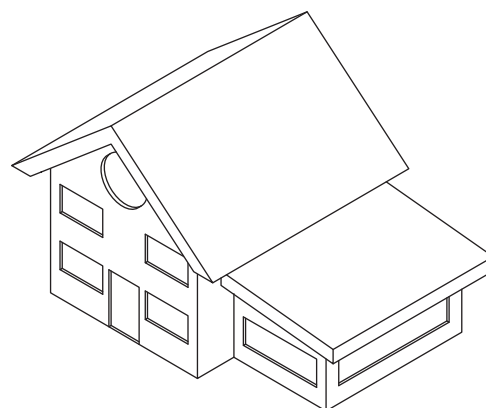
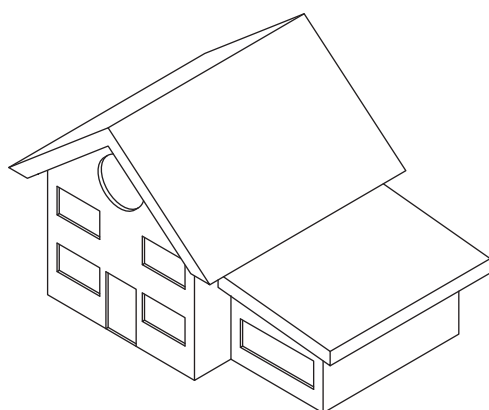
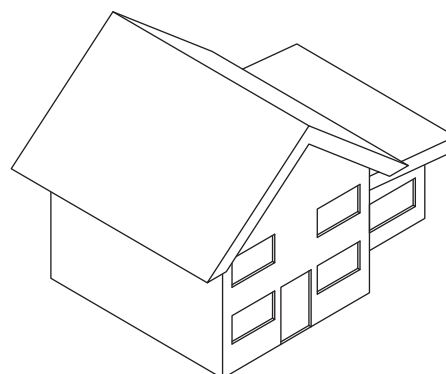
Use a ruler or trammel to measure.


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3. (f) (continued)

(ii) Identify the correct pictorial view by ticking (✓) a box below.

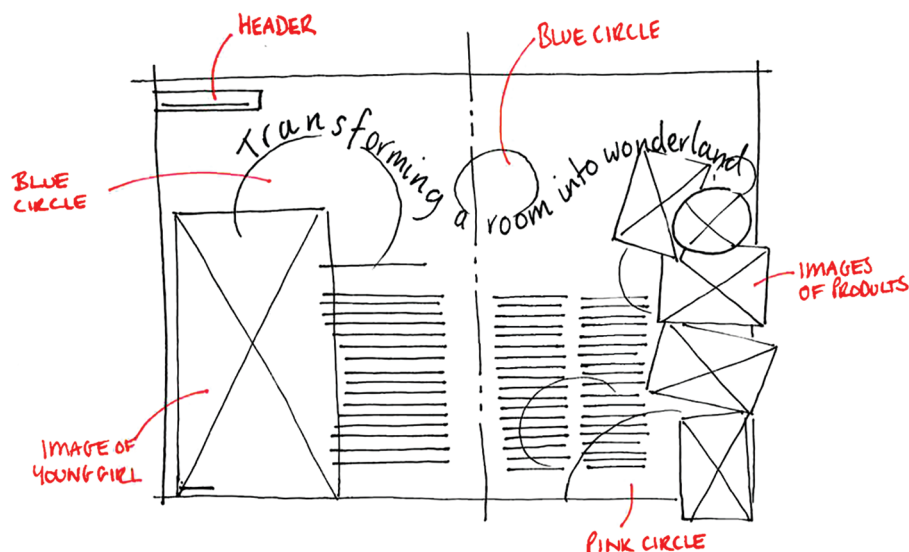
1


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[Turn over



4. A graphic designer has produced a thumbnail sketch with annotations for a magazine layout. The thumbnail sketch is shown below.



- (a) (i) Explain **two** advantages of creating thumbnail sketches.

2

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- (ii) Describe a benefit of including annotations in thumbnail sketches.

1

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- (b) The graphic designer created digital copies of the manual thumbnail sketches.

State the names of **two** input devices that could be used to create digital copies of manual thumbnail sketches.

2

Input device 1: \_\_\_\_\_

Input device 2: \_\_\_\_\_





4. (continued)

A graphic designer has produced the layout for the interior design magazine, called *Stylize*, shown below.

header



(c) Identify, by labelling the layout above, where the following five desktop publishing techniques have been used.

An example has been provided for 'header'.

5

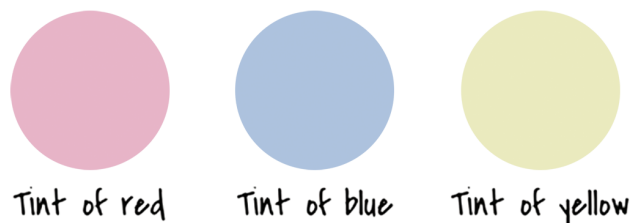
1. Gutter
2. Footer
3. Text wrap
4. Flow text along a path
5. Column

[Turn over



4. (continued)

- (d) The graphic designer used tints of primary colours in the magazine layout. Swatches of these colours are shown below.



- (i) Describe how a tint of a colour is created.

1

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- (ii) Explain **two** reasons why the colours shown above are suitable for the magazine layout.

2

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4. (continued)

The graphic designer removed the background of the disco ball image.



before



after

- (e) (i) State the name of the DTP technique used to remove the background.

1

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- (ii) Explain why the graphic designer removed the background from the original image.

1

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The logo for the magazine is shown below.



- (f) State the name of the DTP technique applied to the text.

1

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[Turn over



4. (continued)

A sample from the magazine layout is shown below.



A sans serif font has been used in the magazine layout.

(g) Explain why a sans serif font was used in the magazine layout.

1

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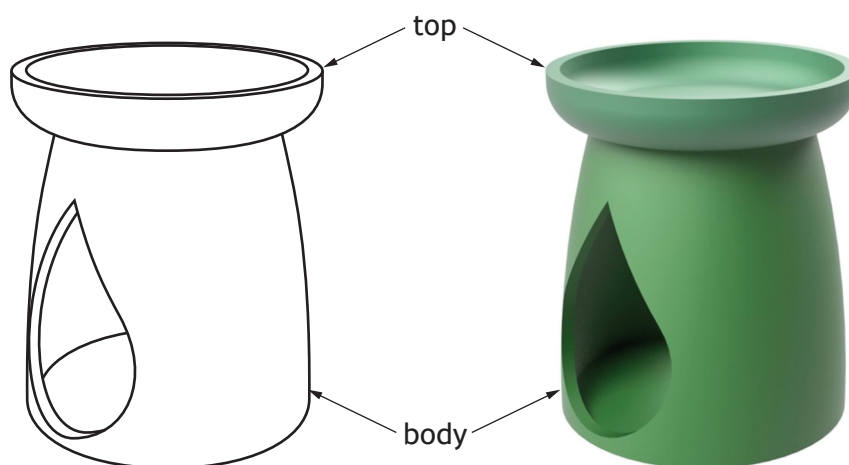


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5. A pictorial line drawing and a 3D CAD illustration of a tealight diffuser are shown below.

The diffuser is made of two parts — a top and a body.



pictorial line drawing

3D CAD illustration

- (a) State **two** computer aided rendering techniques that have been applied to the 3D CAD illustration.

2

Technique 1 \_\_\_\_\_

Technique 2 \_\_\_\_\_

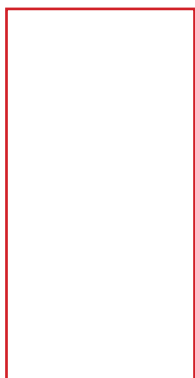
[Turn over



5. (continued)

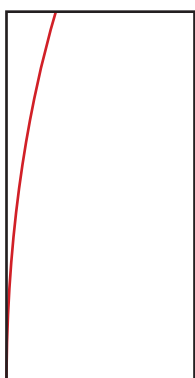
A series of 2D drawing tools were used when modelling the tealight diffuser body.

- (b) State the name of the single 2D CAD drawing tool highlighted in red that is used at each stage.



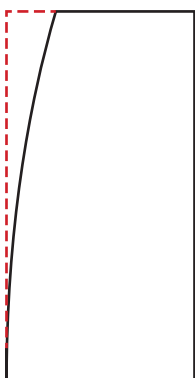
(i) \_\_\_\_\_

1



(ii) \_\_\_\_\_

1



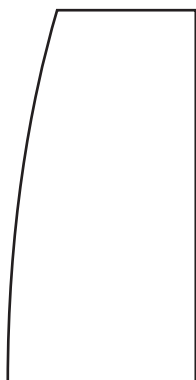
(iii) \_\_\_\_\_

1

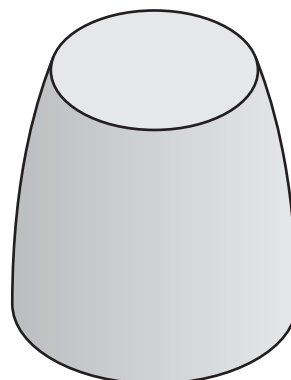


5. (continued)

A series of 3D CAD modelling features and edits were used when modelling the tealight diffuser body.



STAGE 1

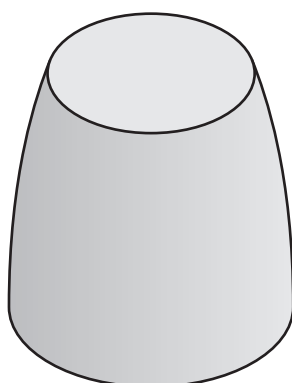


STAGE 2

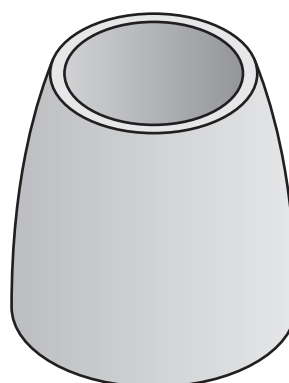
- (c) (i) State the name of the 3D CAD modelling **feature** used between STAGE 1 and STAGE 2.

1

\_\_\_\_\_



STAGE 2



STAGE 3

- (ii) State the name of the 3D CAD modelling **edit** used between STAGE 2 and STAGE 3.

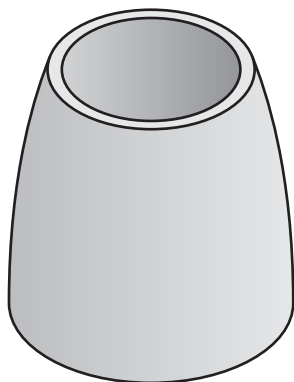
1

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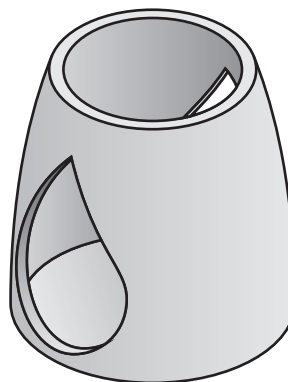
[Turn over



5. (c) (continued)



STAGE 3



STAGE 4

- (iii) State the name of the 3D CAD modelling **edit** used between STAGE 3 and STAGE 4.

1

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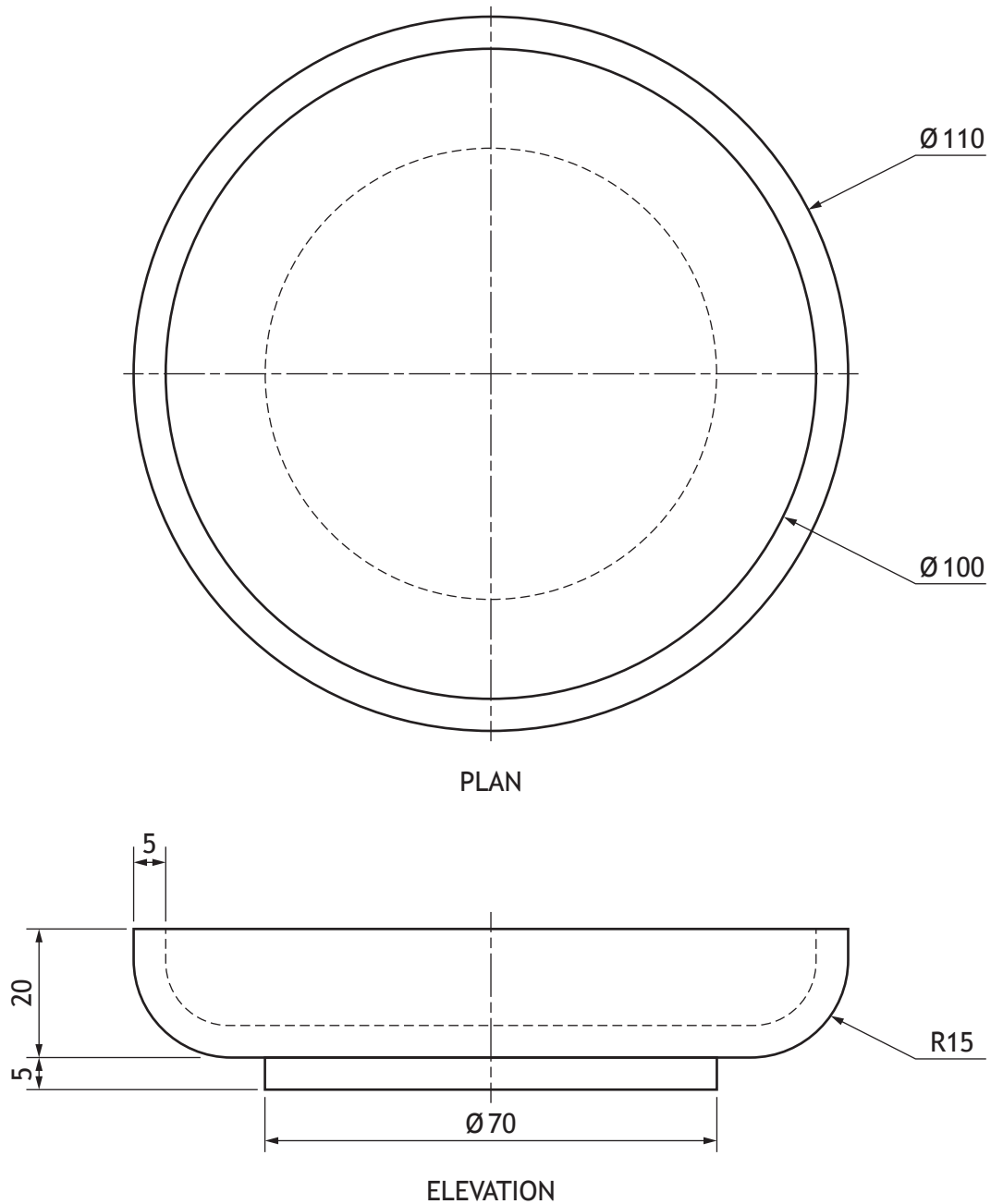
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## 5. (continued)

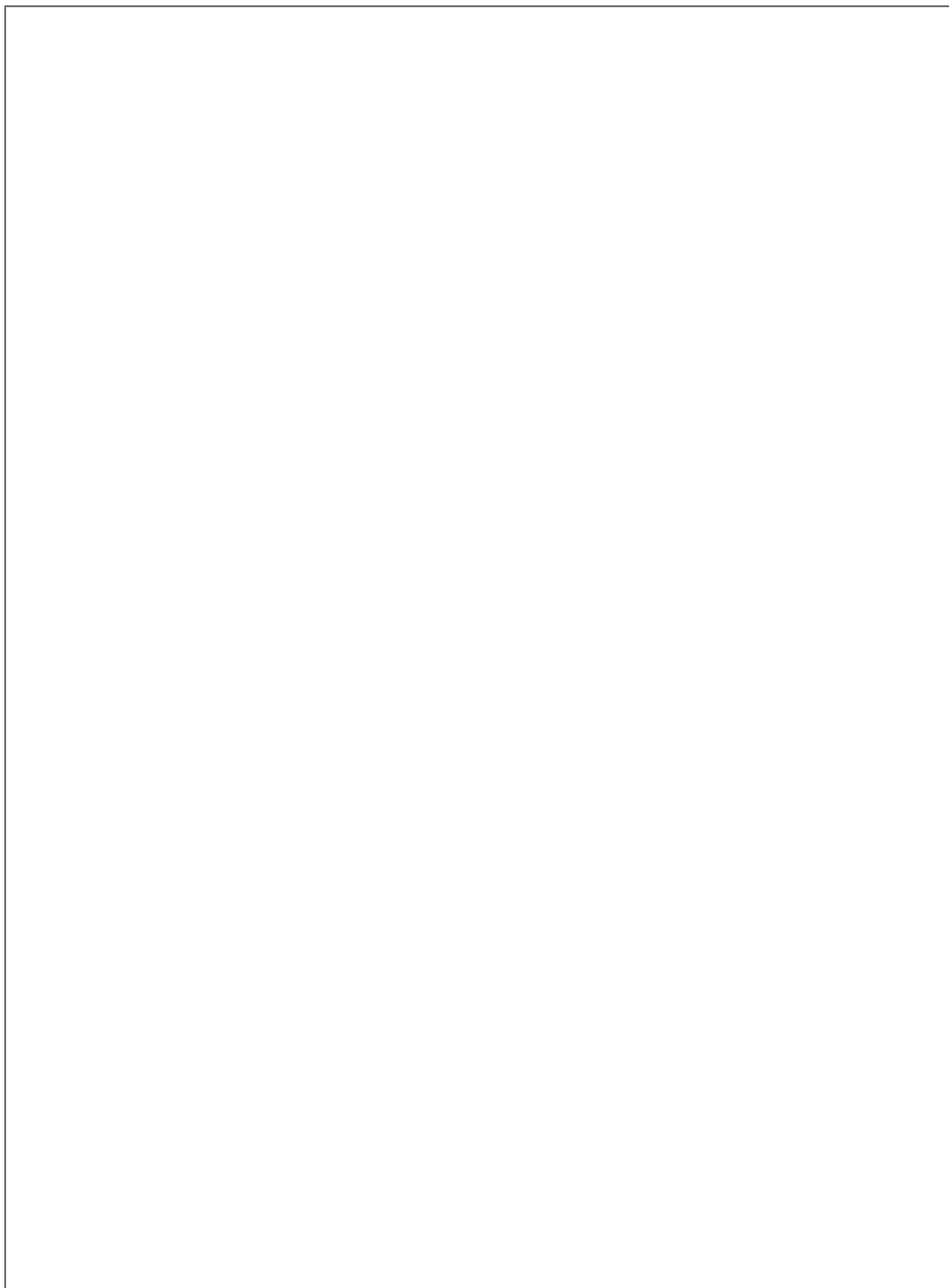
The top of the tealight diffuser was modelled as a separate component. The orthographic drawing of the top is shown below.



5. (continued)

- (d) Describe, using the correct dimensions and 3D CAD modelling terms, how you would use 3D CAD software to model the top. You may use sketches to support your answer.

4

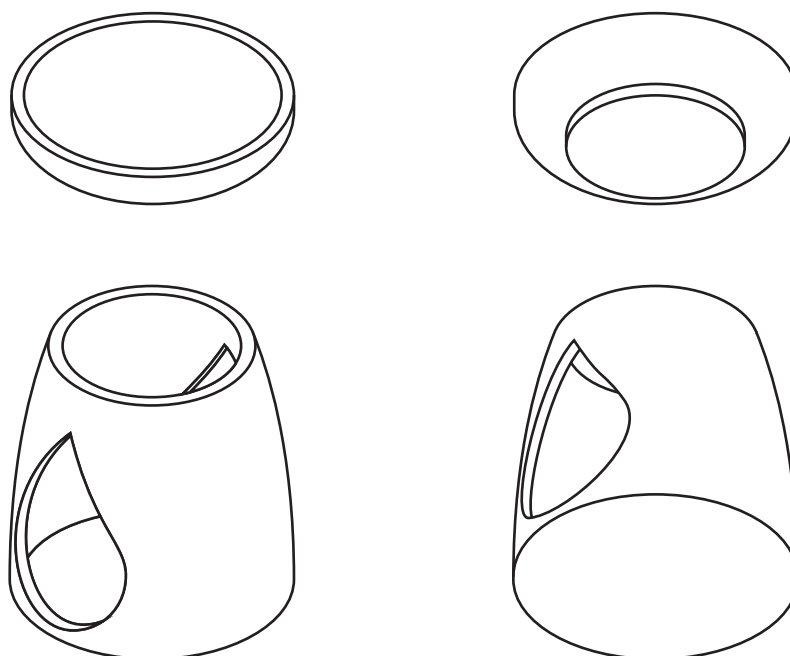


[Turn over



5. (continued)

The top and body of the diffuser were assembled using 3D CAD software. Graphics showing both parts **before** being assembled are shown below.



- (e) Describe, using the 3D CAD constraints, how to **fully assemble** the top and body parts of the tealight diffuser.

You may annotate the graphics above to support your answer.

2

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[END OF QUESTION PAPER]



ADDITIONAL SPACE FOR ANSWERS



ADDITIONAL SPACE FOR ANSWERS



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*Acknowledgement of copyright*

Question 4 (c) Girl in Gray and White Polka Dot Long Sleeve Shirt With Purple Framed Eyeglasses —  
Yan Krukau/pexels.com

Question 4 (e) Disco Ball — KoolShooters/pexels.com

