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FOR OFFICIAL USE

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1330/403

NATIONAL QUALIFICATIONS
2007

THURSDAY, 17 MAY
1.00 PM – 2.45 PM

GRAPHIC COMMUNICATION
STANDARD GRADE
Credit Level

Fill in these boxes and read what is printed below.

Full name of centre				Town	
Forename(s)				Surname	
Date of birth	Day	Month	Year	Scottish candidate number	Number of seat
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1 110 marks are allocated to this paper: 40 marks for Knowledge and Interpretation
70 marks for Drawing Abilities

- 2 Answer all questions.
- 3 Read each question carefully before you answer.
- 4 Written answers may be in **ink** or **pencil**.
- 5 Drawings and sketches **must be in pencil**.
- 6 Sketches need only be in line form—do not spend time rendering.
- 7 Dimensions are given in millimetres or as stated.
- 8 Orthographic drawings are in third angle projection.
- 9 For each question, the element being tested and the mark allocation are shown in brackets, eg (DA 5) means a question on Drawing Abilities worth 5 marks.
- 10 **At the end of the examination**

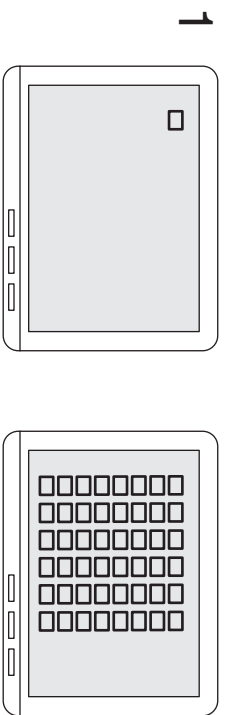
check that your name is on every sheet;
put the sheets in correct numerical order;
place this sheet on top of the others;
join all sheets together by **stapling** at the top left-hand corner;
before leaving the examination room, you must give these sheets to the invigilator (if you do not you may lose all the marks for this paper).

	KI	DA
1		
2		
3		
4		
5		
6		
7		
8		
9		
Total Marks		

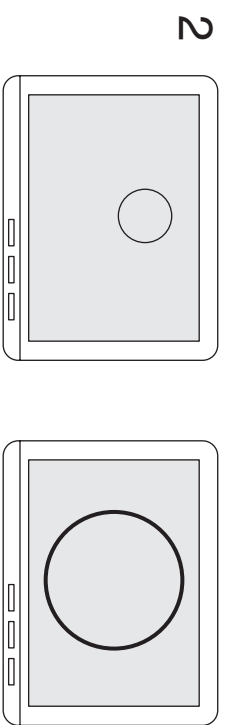


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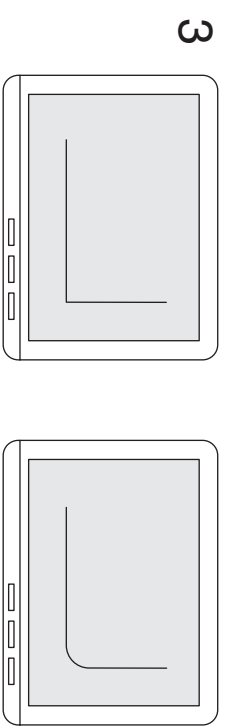
The following drawings are the results of applying twelve 2D CAD commands. State the CAD command used in each case.



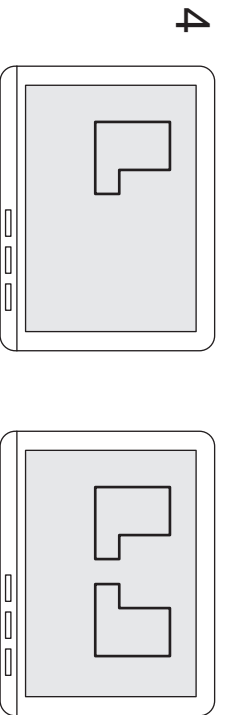
COMMAND



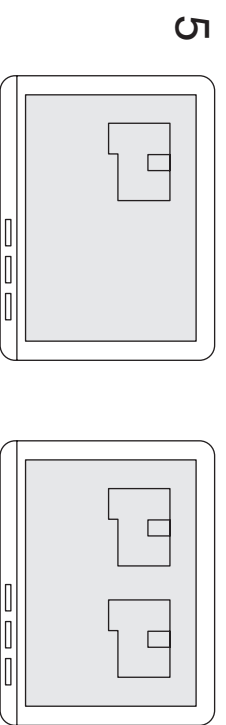
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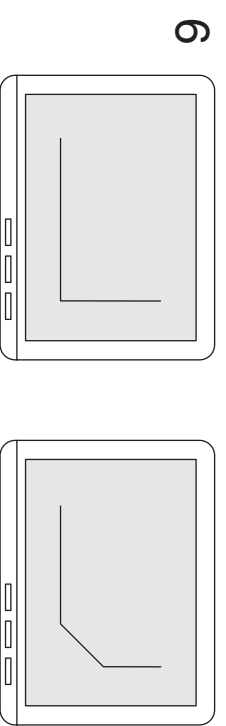
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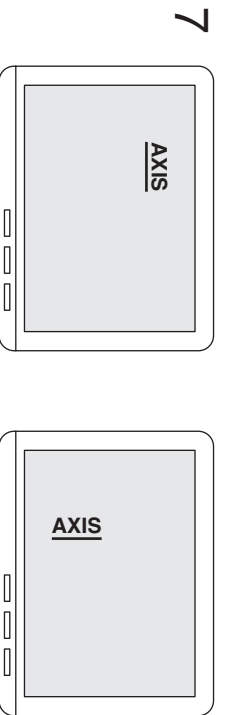
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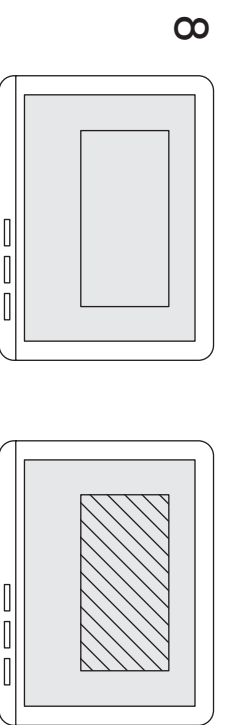
COMMAND



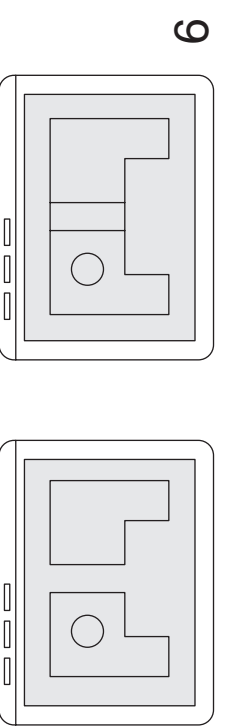
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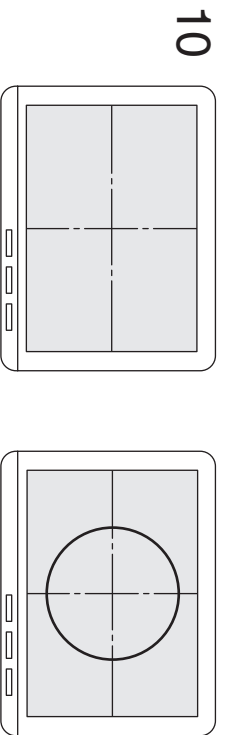
COMMAND



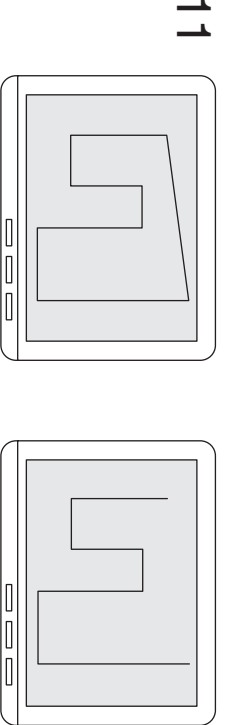
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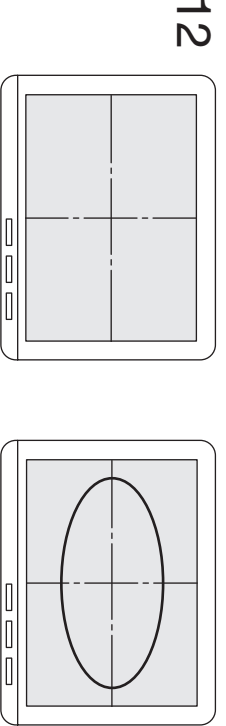
COMMAND



COMMAND



COMMAND

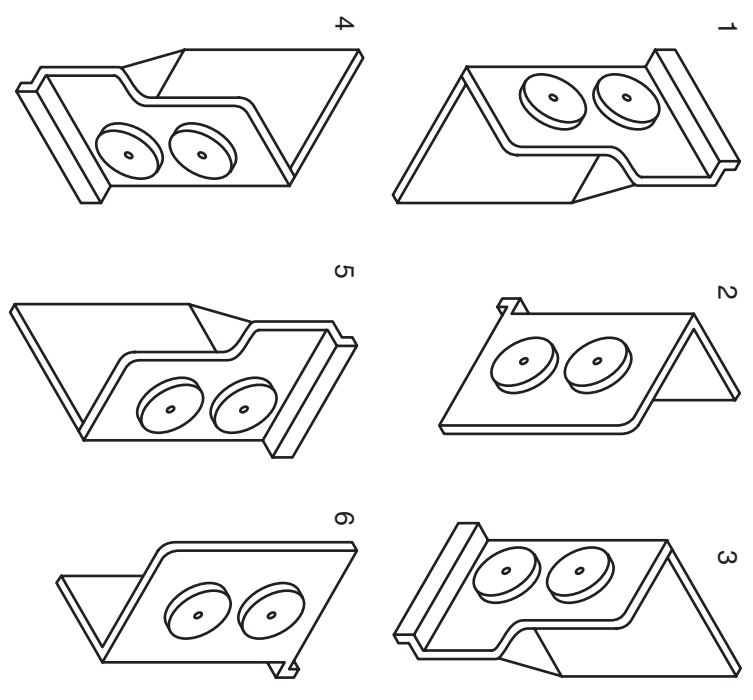


COMMAND

Total (KI 12)

The elevation, end elevation and plan of a wheeled bracket are shown.

(a) Six pictorial views are shown below.



State which **two** of these views represent the wheeled bracket.

Answer 1 Answer 2

KI 2

(b) State the name given to the type of isometric view Y shown.

View Y

KI 1

(c) State the purpose of a sectional view.

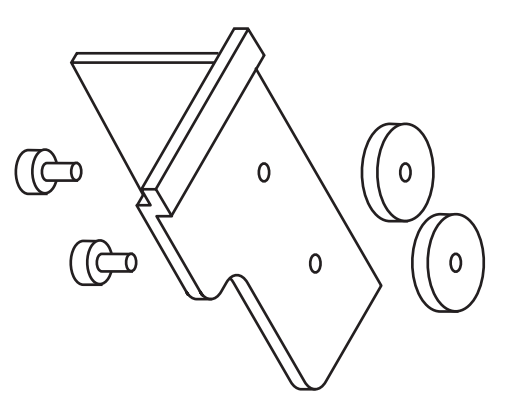
Purpose

KI 1

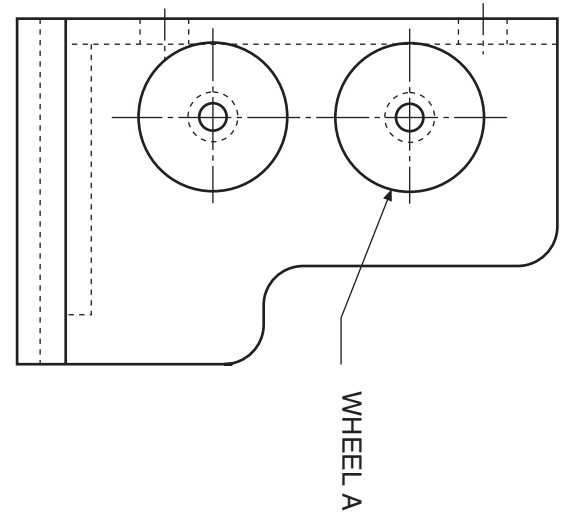
(d) On Drawing Z, add the overall height of the bracket and the diameter of wheel A, using the correct BS convention for dimensioning.

KI 4

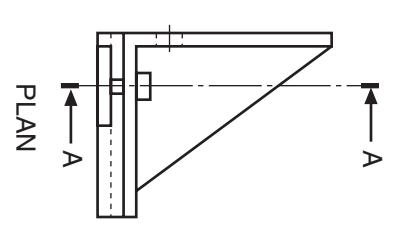
Total (KI 8)



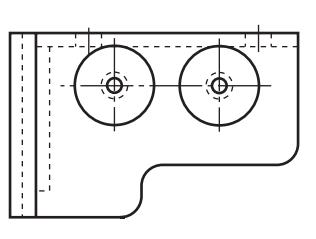
ISOMETRIC VIEW Y



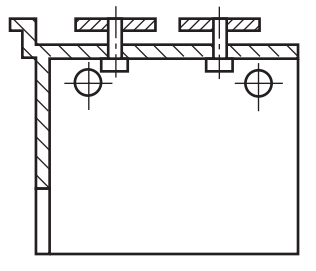
DRAWING Z



PLAN



ELEVATION



SECTION ON A - A

ORTHOGRAPHIC VIEW

The use of CAD has helped the production of new designs.

(a) Describe **three** ways in which the use of a CAD package would speed up production of new designs, when compared to manual methods.

- 1
- 2
- 3

KI 3

(b) Explain what the term **layer** means when used in CAD.

Explanation

-
-

KI 1

(c) State the names of the **two** types of plotter used to produce hard copies of CAD drawings.

Plotter

Plotter

KI 2

(d) Explain the term **compatible** when applied to software.

Answer

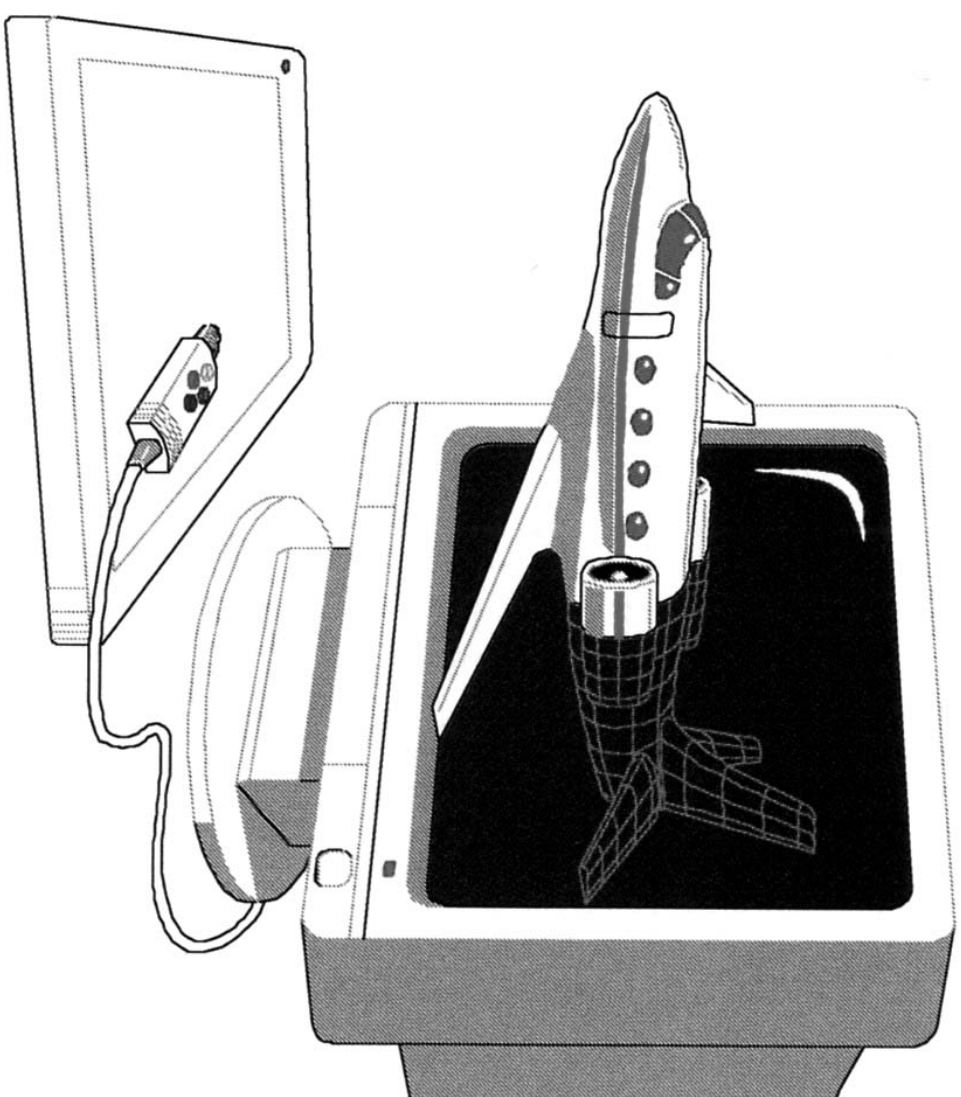
.....

KI 1

(e) State **two** advantages to the designer of having the ability to construct computer generated 3D models over built scale models.

- 1
- 2

KI 2



(f) State the names given to **two** types of computer-generated models.

- 1
- 2

KI 2

Total (KI 11)

The choice of colour is an important factor when designing new products.

(a) Add the missing information in the table below.

Colours	Situations	Reasons for choice
White	Used for fridge designs	
	Used for new council staff uniforms	Associated with reliability
Green	Used for the packaging of a new bathroom cleaning product	
	Used for main colour of a shop that sells holidays	It is associated with happiness and sunshine
Red	Used in the design of a sports car	
	Used for the border colour on packaging of a new product	It is in harmony with yellow

KI 6

(b) State **one** receding colour that harmonises with blue.

Receding colour

KI 1

(c) State **one** advancing colour that contrasts with blue.

Advancing colour

KI 1

(d) State the effect created by using red, yellow and blue combined in a colour scheme.

Effect.....

KI 1

Total (KI 9)



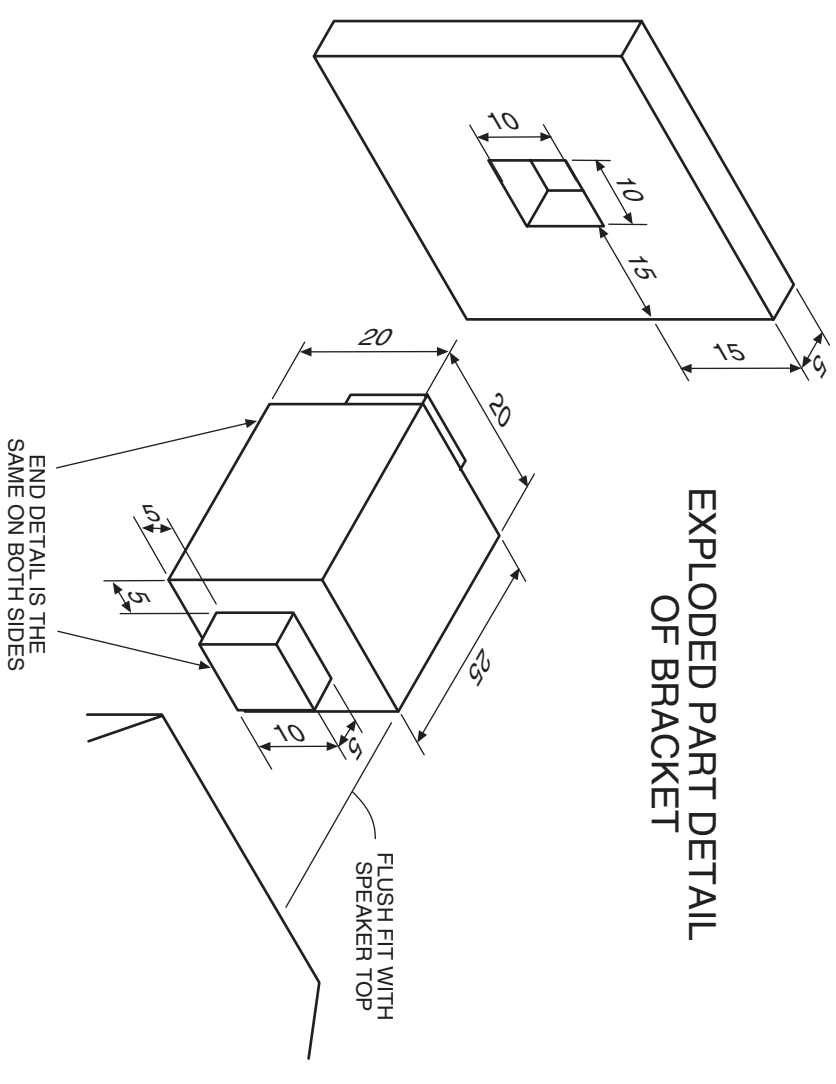
The incomplete end elevation of a wall mounted speaker and bracket is given. A pictorial sketch and exploded part detail are also shown.

Draw:

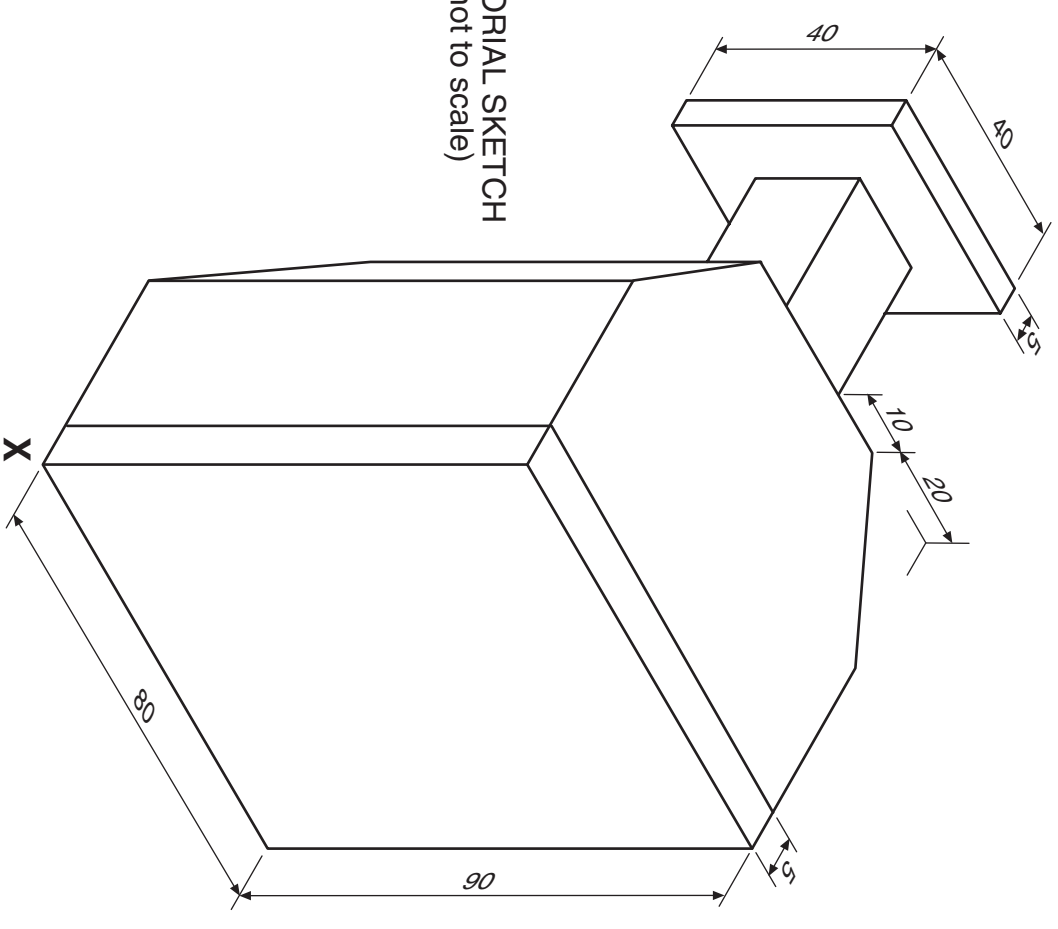
- (a) the complete end elevation;
 - (b) the elevation projected from the end elevation, using given start X.
- Show hidden detail.**

DA 5
 DA 7
Total (DA 12)

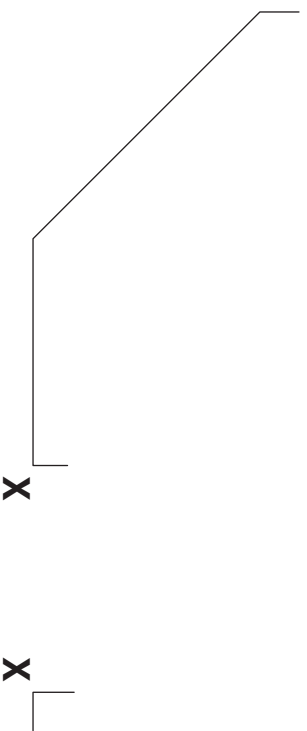
EXPLODED PART DETAIL OF BRACKET



PICTORIAL SKETCH (not to scale)



END ELEVATION



ELEVATION

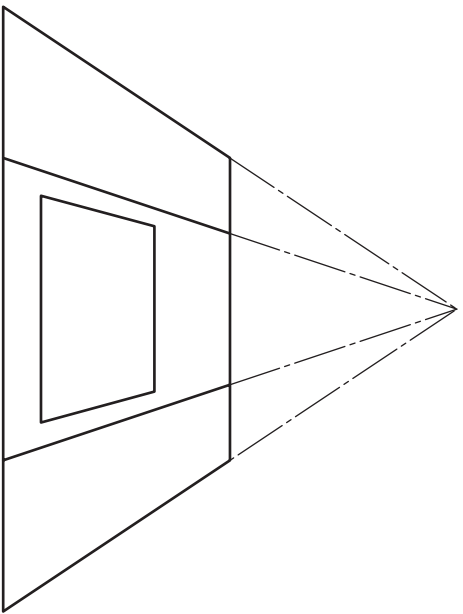
The elevation of the base of a trophy in the shape of a cut hexagonal pyramid is given. A pictorial sketch of the trophy and base is also shown.

Draw:

- (a) the plan of the base projected from the elevation;
- (b) the end elevation projected from plan and elevation.

Do not draw the trophy.

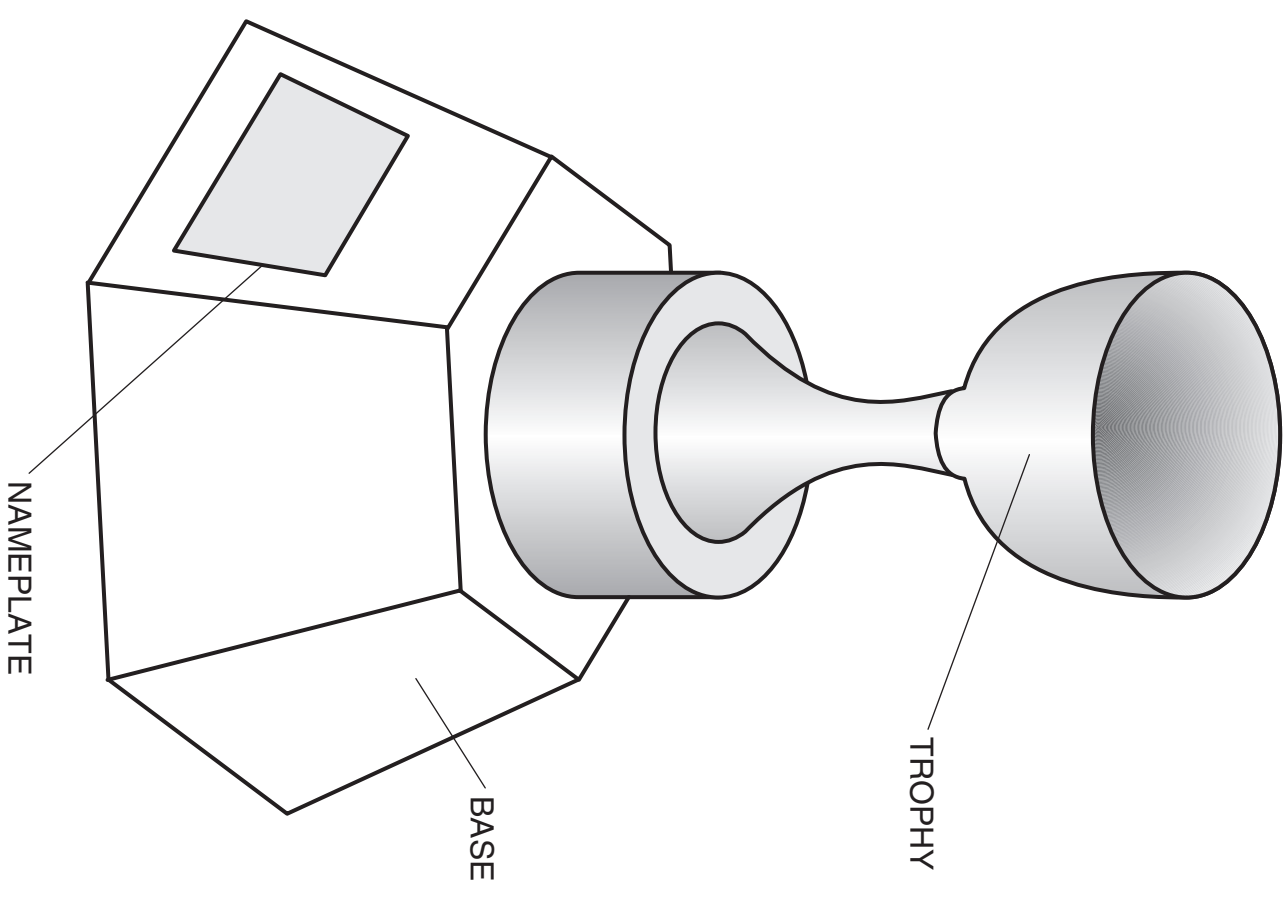
DA 6
DA 4
Total (DA 10)



ELEVATION

END ELEVATION

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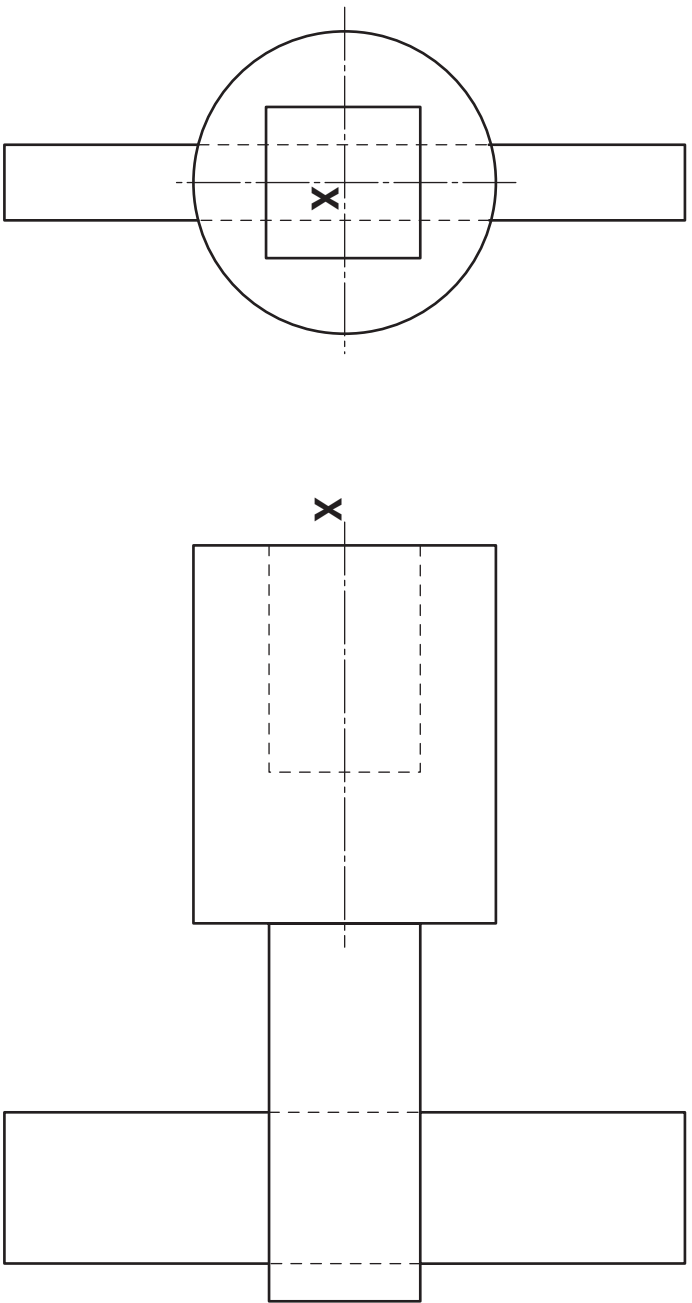
The elevation and end elevation of a radiator key are shown.

Draw:

- (a) the plan (**show hidden detail**);
- (b) full size, an isometric view of the radiator key, using the given start **X**. (**Do not show hidden detail.**)

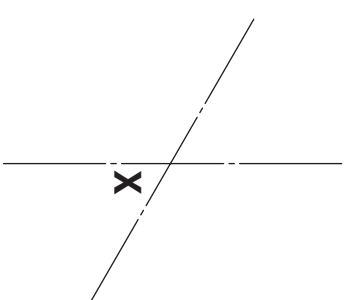
DA 3
DA 15
Total (DA 18)

PLAN



END ELEVATION

ELEVATION



ISOMETRIC

The end elevation and plan of a road sign post bracket are given. A pictorial sketch of the road sign, post and bracket is also shown.

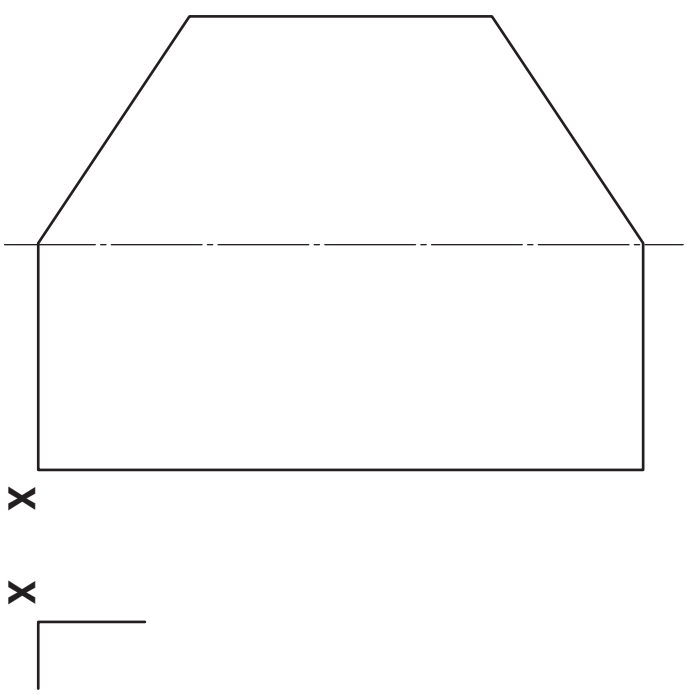
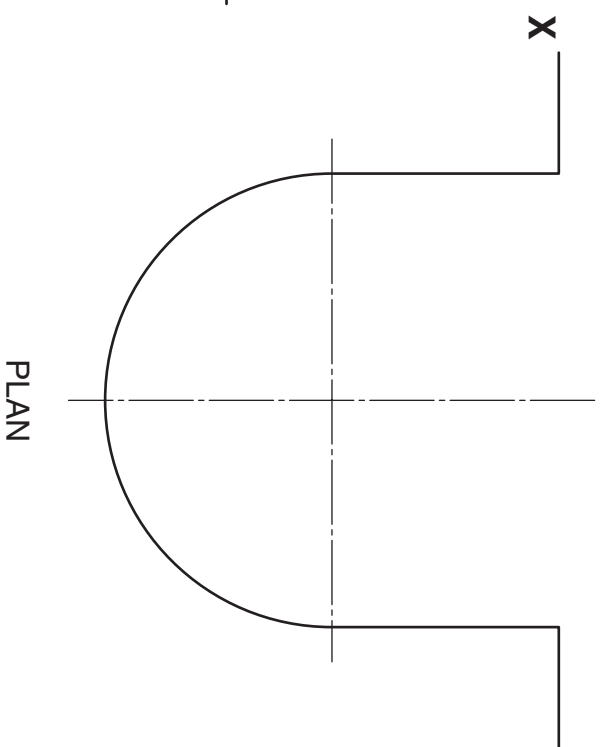
Draw:

- (a) the elevation of the bracket projected from the end elevation and plan;
- (b) the development of the bracket, using start **X**.

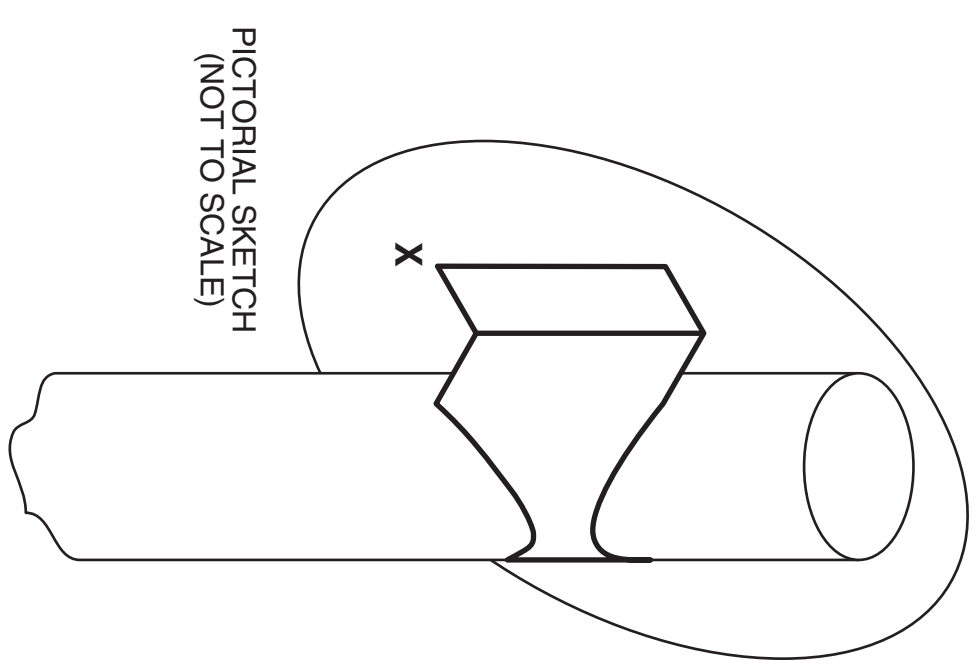
DA 7

DA 7

Total (DA 14)



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The orthographic views of the parts of a wardrobe handle are shown. A pictorial view of the assembled wardrobe handle is also shown.

Draw, assembled to the given sizes:

- (a) the elevation of the handle (**show all hidden detail**);
- (b) the plan of the handle (**show all hidden detail**);
- (c) the sectional end elevation of the handle on **A-A** (**do not show hidden detail**).

The pin is given as a start.

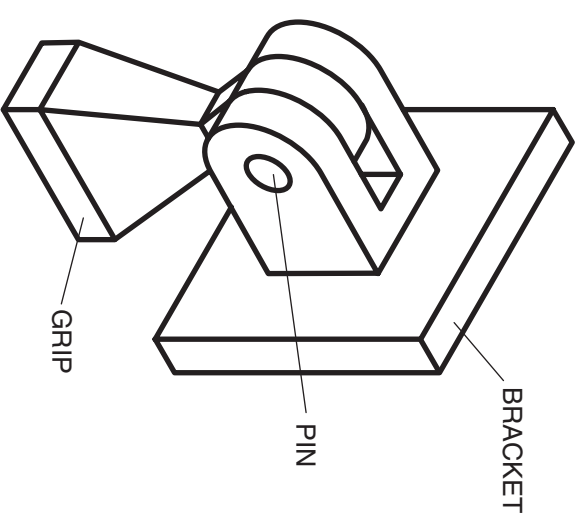
Total (DA 16)

DA 4

DA 5

DA 7

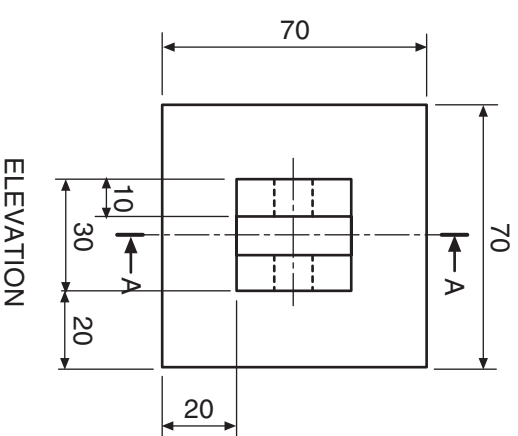
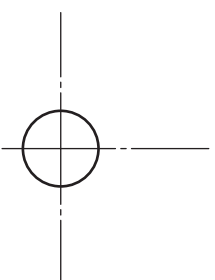
PICTORIAL SKETCH
(NOT TO SCALE)



PLAN



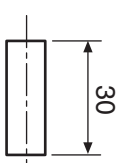
ELEVATION



BRACKET

ELEVATION

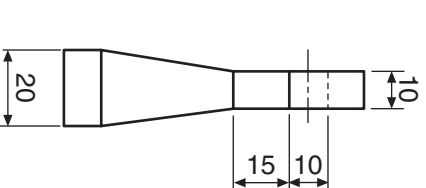
END ELEVATION



PIN

ELEVATION

END ELEVATION



GRIP

ELEVATION

END ELEVATION

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