

STAPLE HERE

FOR OFFICIAL USE

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X033/301

NATIONAL
QUALIFICATIONS
2007

MONDAY, 21 MAY
9.00 AM – 12.00 NOON

GRAPHIC
COMMUNICATION
HIGHER

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
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

1 **140 Marks are allocated to this paper.** Section A = 40 marks
Section B = 100 marks

- 2 Candidates should attempt **all** questions in **Section A** and are advised to spend approximately 45 minutes on this section. A supplementary page is included at the end of **Section A** for use if extra space is required.
- 3 Candidates should attempt questions 8a, 8b, 9, 10a and 10b and **either** question 11 **or** question 12 in **Section B**.
- 4 Read each question carefully before you answer.
- 5 Written answers may be in **ink or pencil**.
- 6 Drawings and sketches **must be in pencil**.
- 7 Dimensions are given in millimetres or as stated.
- 8 Orthographic drawings are in third angle projection.
- 9 **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).

Question	Marks
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1	
2	
3	
4	
5	
6	
7	

Section A Total	
--------------------	--

8a	
8b	
9	
10a	
10b	
11	
12	
Section B Total	

EITHER
OR

Total Marks A + B	
----------------------------------	--



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A supplementary page is included at the end of Section A for use if extra space is required.

Marks

1. Preliminary, Production and Promotional graphics are used extensively in the engineering, construction and consumer industries.

Describe the **purpose** of each type of graphic and state one **example of a graphic** of that type.

- (a) Preliminary Purpose

..... 1

Example of graphic 1

- (b) Production Purpose

..... 1

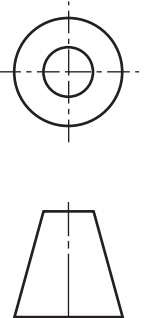
Example of graphic 1

- (c) Promotional Purpose

..... 1

Example of graphic 1

(6)



- (a) State the name of the British Standard Symbol shown above.

Name 1

- (b) State the **type** of drawing where this symbol would be used.

..... 1

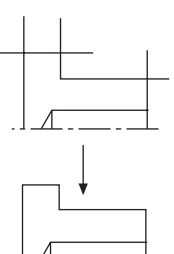
- (c) State the **two** types of page orientation.

Orientation 1Orientation 2 2

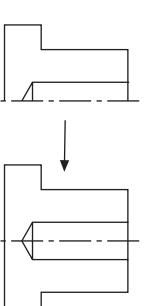
(4)

3. (a) Shown below are stages in drawing an object.

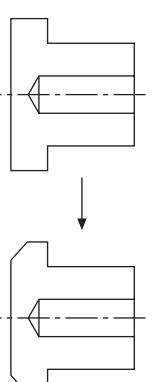
State the CAD command that is indicated at each stage.



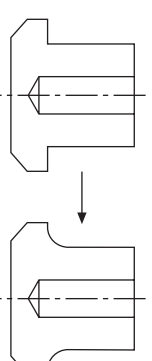
Command



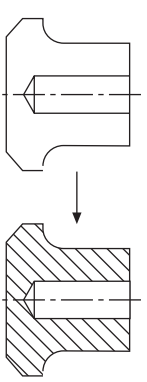
Command 1



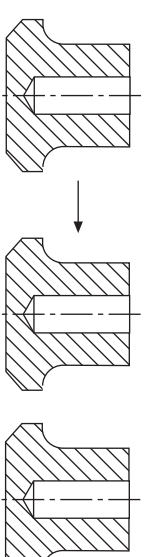
Command



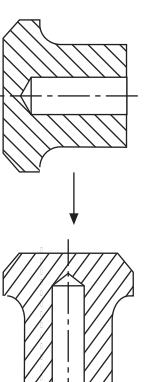
Command 1



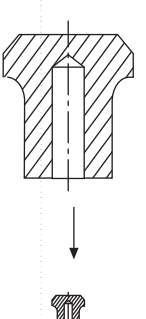
Command



Command 1



Command



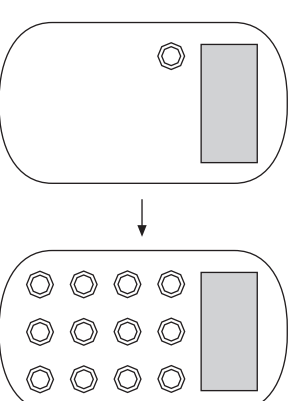
Command 1

- (b) (i) A single button is positioned on the elevation of a calculator. State the single CAD command apart from "multiple copy" that will create the twelve buttons.

Command

- (ii) State the CAD feature that would allow the button to be used in any future design.

Feature



2

1

- (c) Two architects exchange CAD drawings electronically by attaching them to an e-mail.

- (i) State the piece of **hardware** required for each computer to allow the exchange of drawings.

..... 1

- (ii) State a requirement that each computer system must have to allow the architects to open and edit each others drawings.

..... 1

[X033/301] Candidate's Name (9)

4. (a) (i) State the type of sectional view shown in **Drawing 1**.

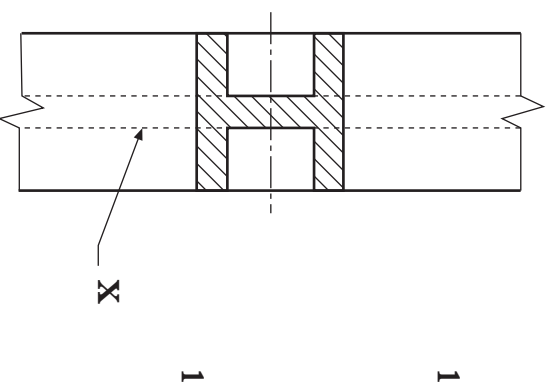
.....

(ii) State the type of sectional view shown in **Drawing 2**.

.....

(iii) State the type of sectional view produced by the cutting plane in **Drawing 3**.

.....



Drawing 1

.....

(b) The British Standard **description** of three types of line are given.

State the British Standard **application** for each of the indicated line types **X**, **Y** and **Z**.

Line type **X** Description: Dashed thin
 Application

.....

Line type **Y** Description: Continuous thin straight with zigzags
 Application

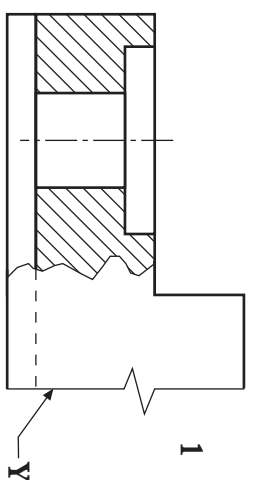
.....

Line type **Z** Description: Chain thin, thick at ends and changes of direction
 Application

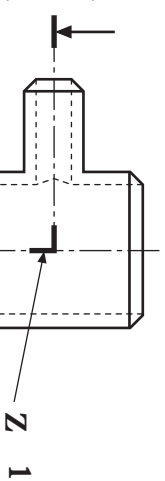
.....

.....

.....

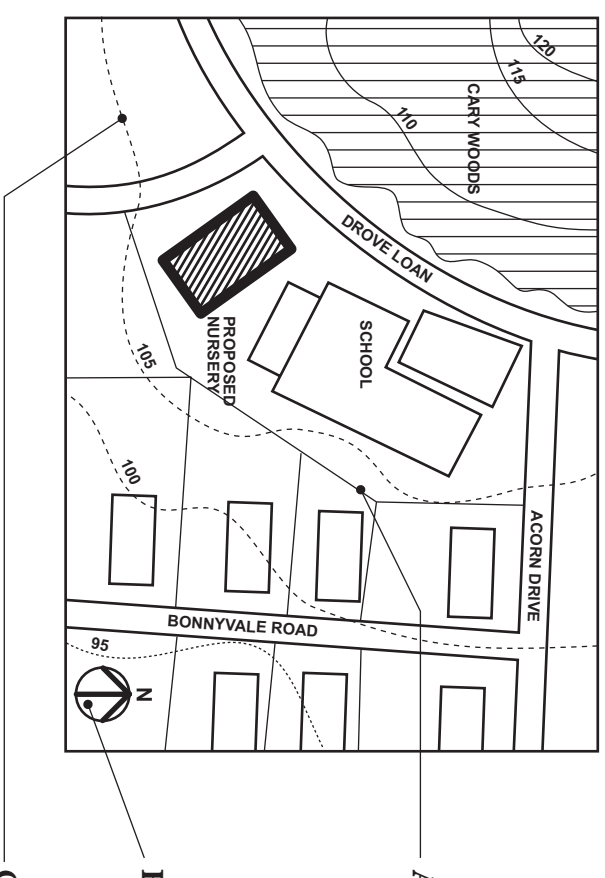


Drawing 2



Drawing 3

5. A BLOCK PLAN is shown below, not to scale.



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

(b) State the feature represented at **A**.

(c) State the name of the symbol represented at **B** and **C**.

B..... **C**.....

(d) State the names of **two** other types of architectural building plans commonly used.

(i) (ii)

6. **Colour Gradient**, **Tonal Scale** and **Highlight** are three effects that could be used when rendering an illustration.

Describe the effect produced by each term.

Colour Gradient

.....

Tonal Scale

.....

Highlight

.....

1

1

1

1

1

1

1

1

1

1

1

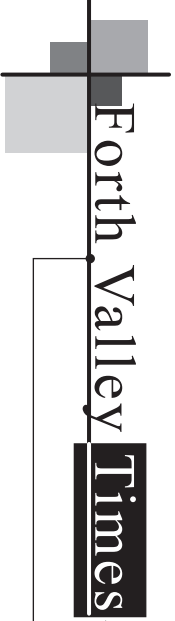
1

Section A

SUPPLEMENTARY PAGE

Marks

7. An example of a desk top published news sheet is shown.
- (a) State the desk top publishing **effect** indicated at A. 1
- (b) State the desk top publishing **terms** for each of the features (i) to (vi). 6



Forth Valley Times

A

(i)

(ii)

(iii)

(iv)

(v)

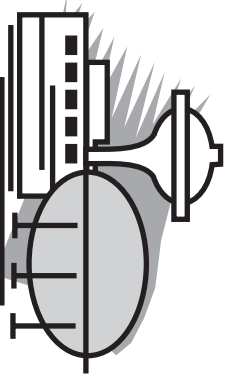
(vi)

Fresh start with Finnish firm

CHEMICAL firm Incenda's take-over by a Finnish company has been welcomed by a local MP. Combine Limited completed the purchase of the Grangemouth based fine chemical producer on Monday. All 50 of Incenda's employees will retain their jobs at the Earls Road site.

The new combined business will create a major new force in the global fine chemical sector, supplying agrochemicals, pharmaceutical and specialist chemical industries.

David Rice, vice president of Incenda Fine Chemicals and now managing director of SimCo UK Ltd, said:



Artist's impression

skilled workforce. MP Michael Connarty said: "This is a good conclusion to a worrying story. Incenda had suffered a couple of big blows in the last few years, they had invested a lot of money in new equipment, but didn't have a viable product to make."

Page 1

(7)

Use this page if extra space is required for answers to Questions 1 to 7. **Number each answer clearly.**

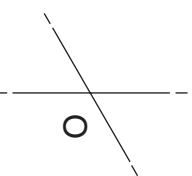
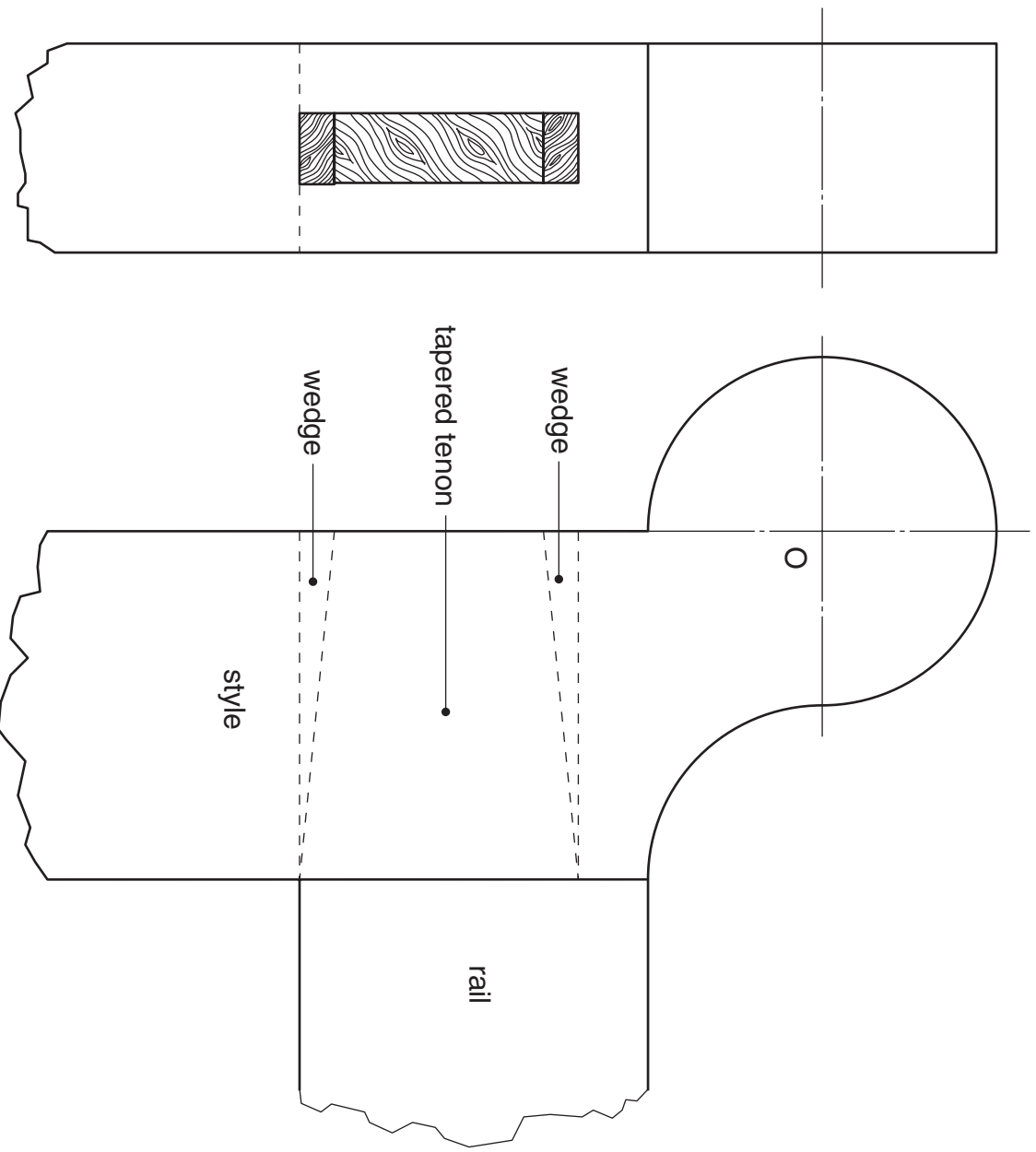
Section B

The elevation and end elevation of a corner of a gate, are shown. A sketch of the gate and detail of the exploded parts are also shown.

Draw an isometric view of the corner with the rail and wedges exploded. Use the given start O.

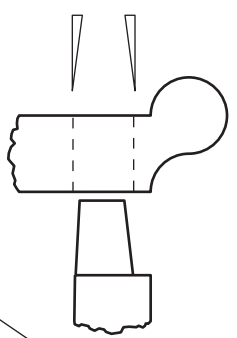
Do not show hidden detail.

(20 marks)

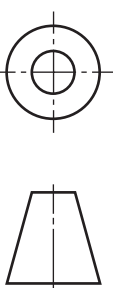


END ELEVATION
SCALE 1:1

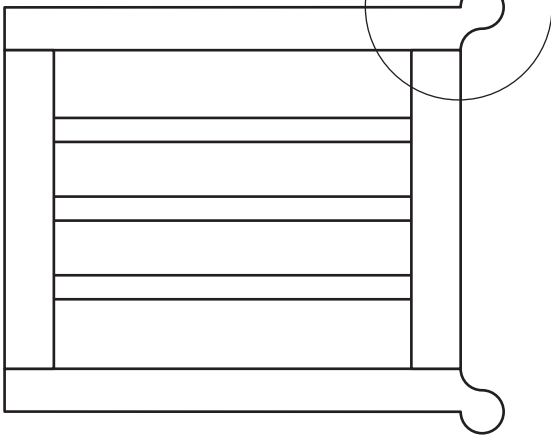
ELEVATION



detail not to scale



SKETCH (NOT TO SCALE)



ISOMETRIC VIEW

[X033/301]

a	
b	
c	
d	
e	
f	
g	
h	
i	
j	
k	
l	
m	
n	

A sketch and development of part of a garden gate latch are shown, not to scale.

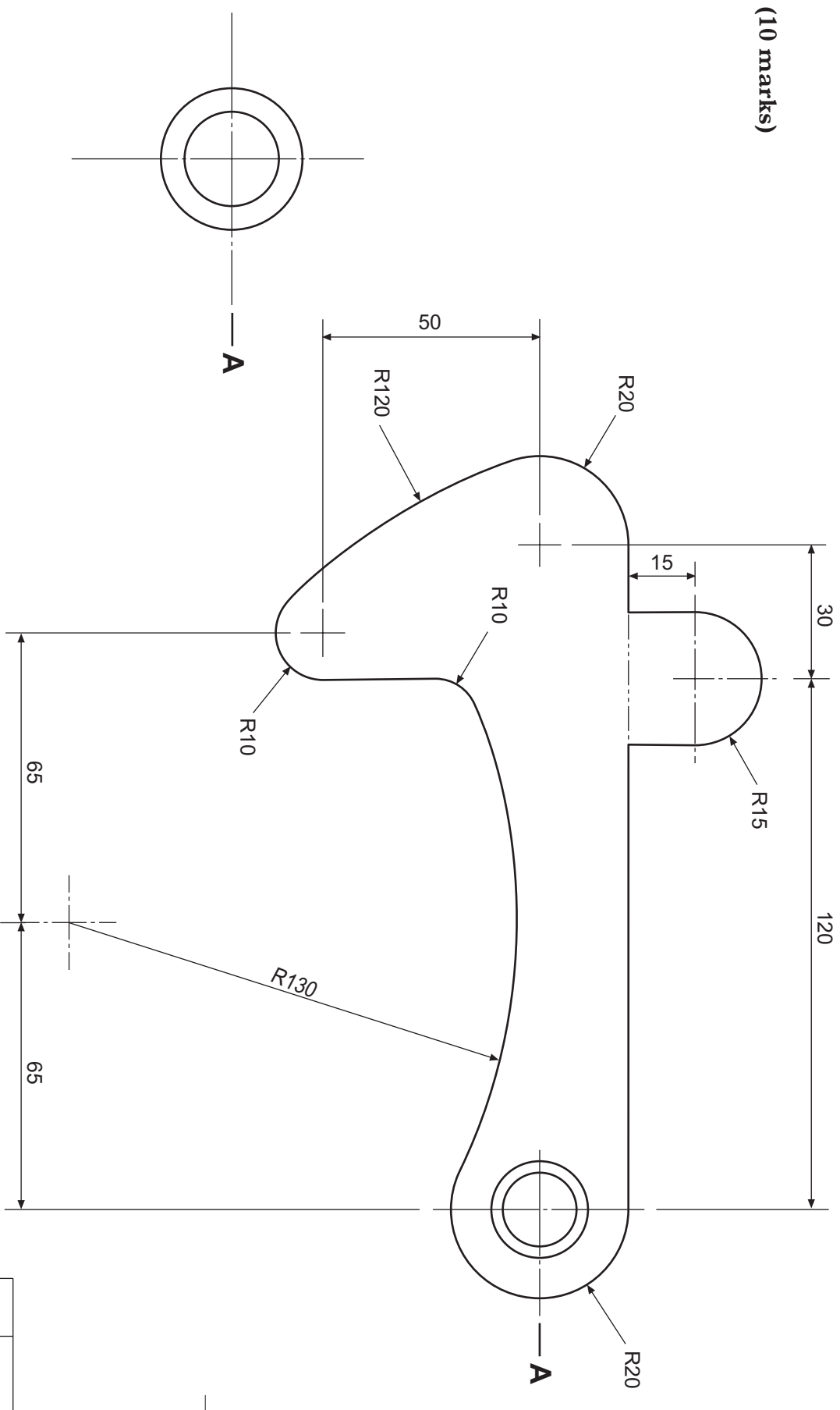
Draw the development of the latch on the given start, to a scale of 1:1.

Show clearly the centres used to draw all the arcs.

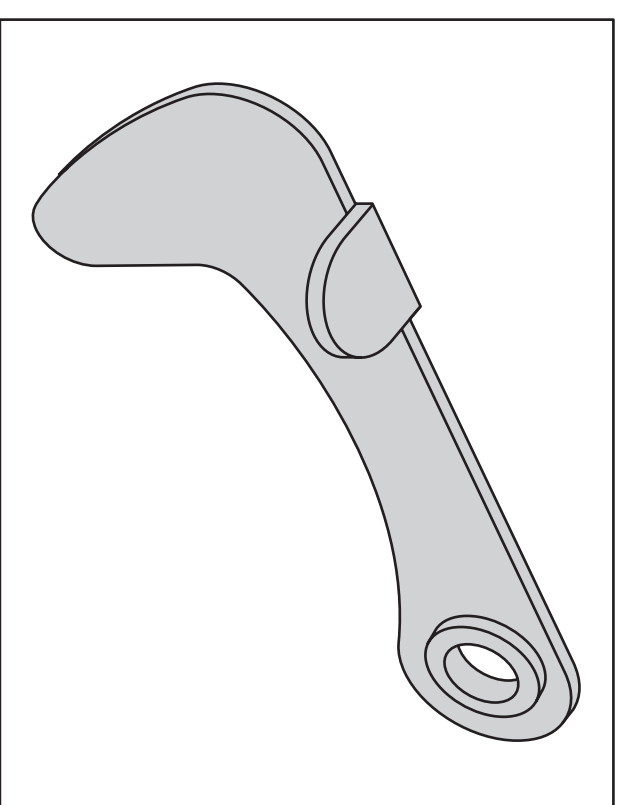
Do not show dimensions.

(10 marks)

Section B

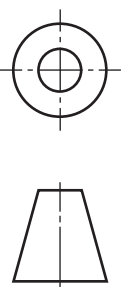


DEVELOPMENT OF LATCH (NOT TO SCALE)



SKETCH OF LATCH (NOT TO SCALE)

a	
b	
c	
d	
e	
f	
g	
h	
i	
j	
k	
l	
m	
n	



Parts of the upper part of a vice are shown.
A parts list is shown. A pictorial view is also shown.

Draw a full size sectional elevation **A-A** of the assembled parts on **Worksheet Q9**.

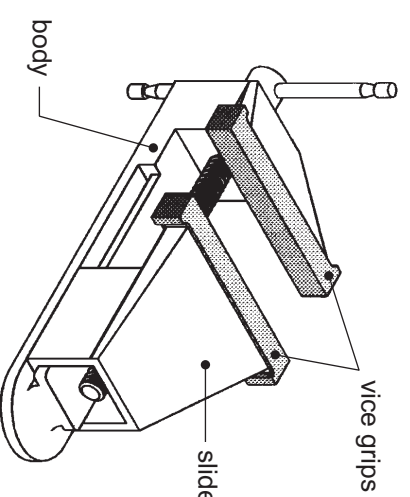
Locate faces **X** and **Y**, 40 mm apart.

Note: Only the dimensions necessary to draw the sectional view have been shown.

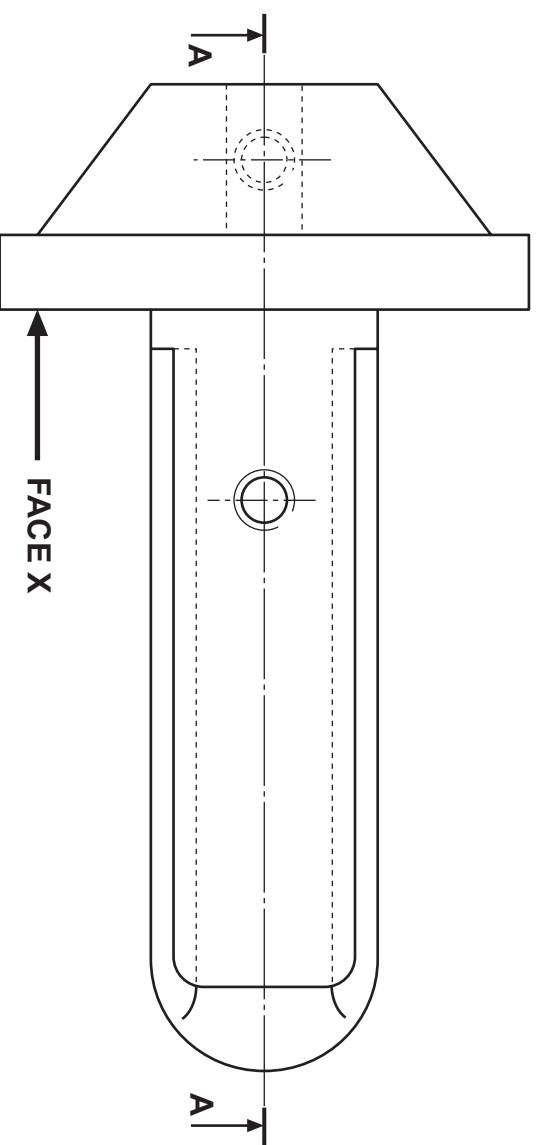
Do not show hidden detail. Do not hatch the screw and tommy bar. (20 marks)

Section B

Part No.	Part	No. off
1	BODY	1
2	SLIDE	1
3	SCREW	1
4	VICE GRIP	2



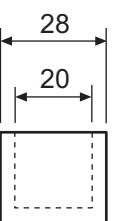
PICTORIAL VIEW



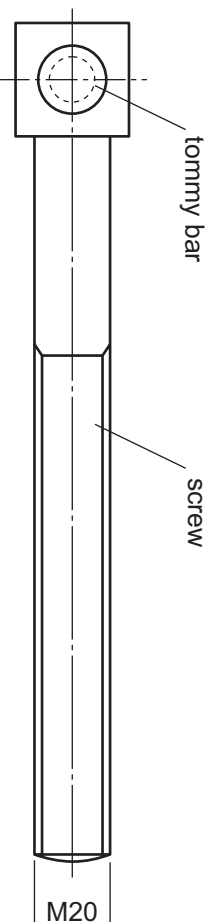
PLAN



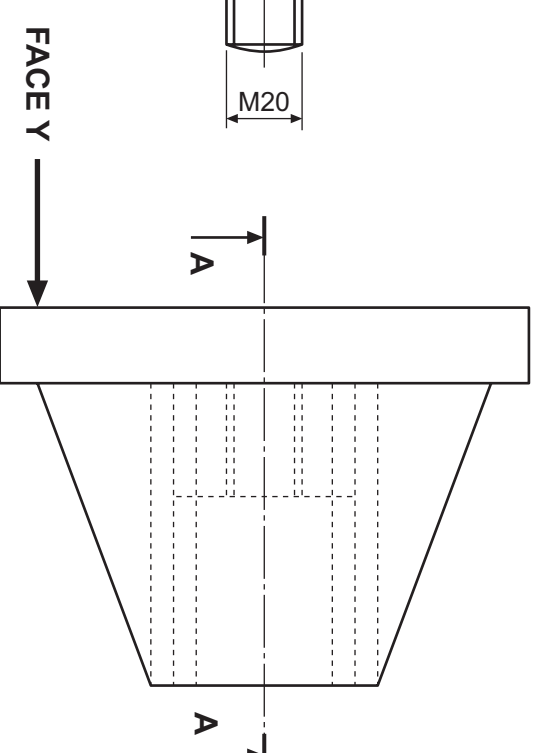
PLAN



ELEVATION

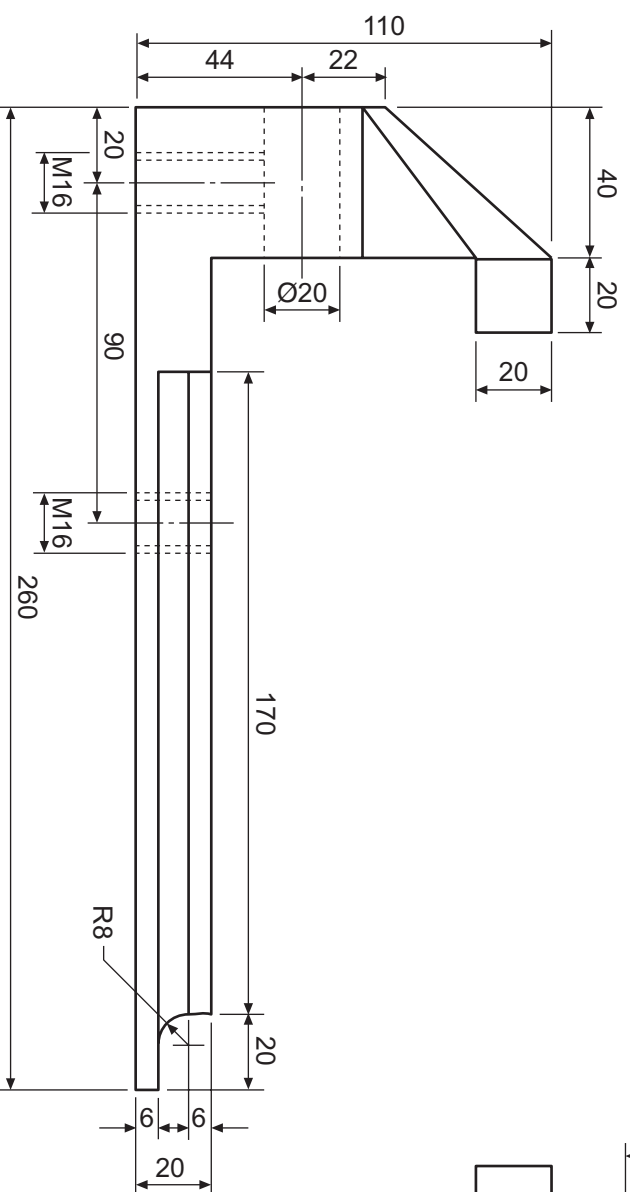


③ SCREW & TOMMY BAR

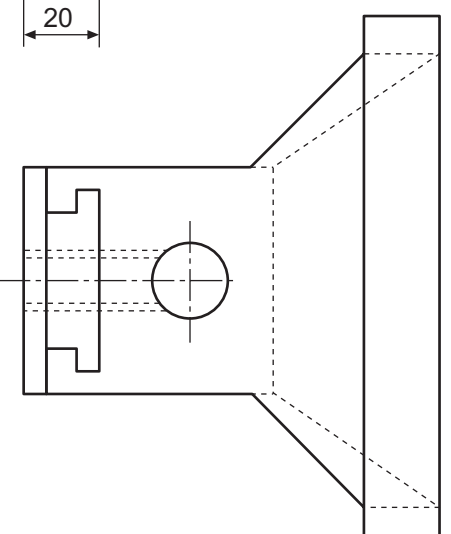


PLAN

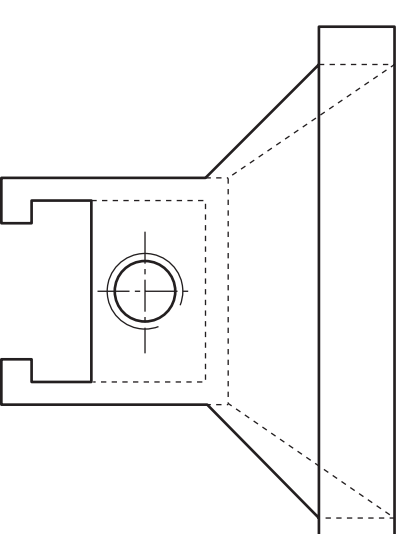
④ VICE GRIP



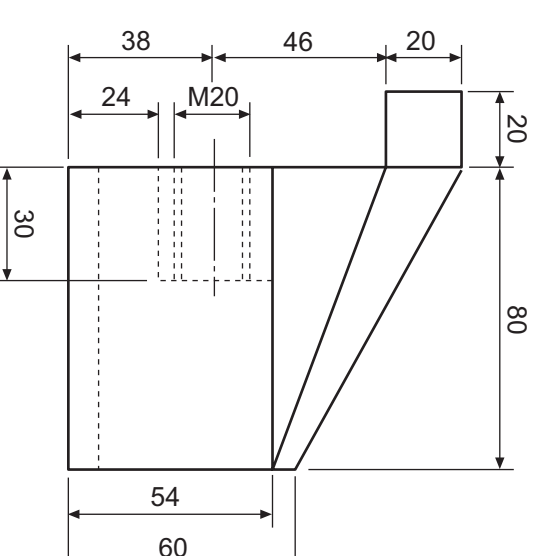
ELEVATION



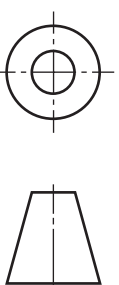
END ELEVATION



END ELEVATION



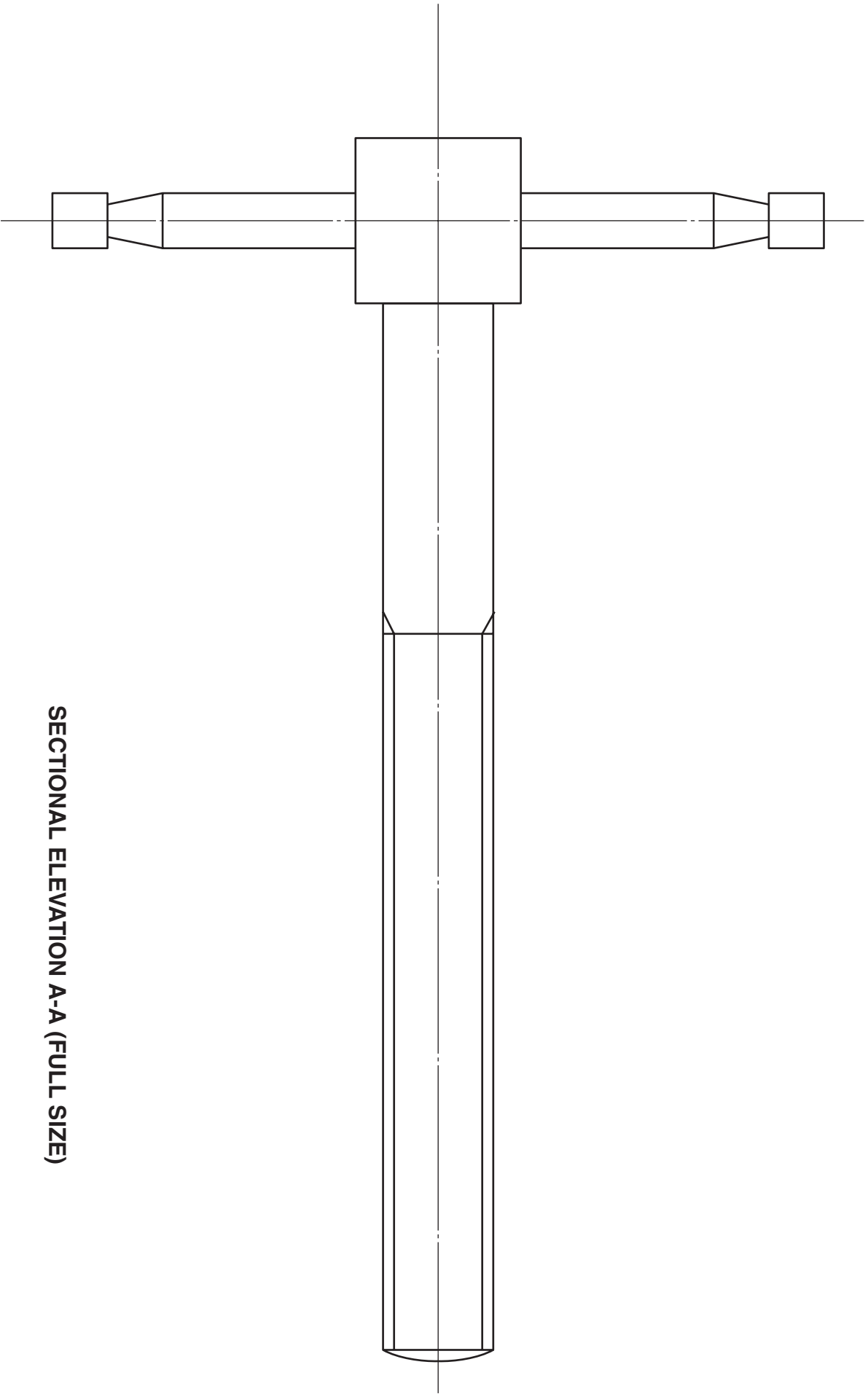
ELEVATION



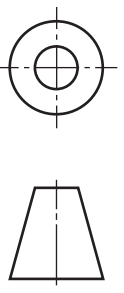
① BODY

② SLIDE

Section B



SECTIONAL ELEVATION A-A (FULL SIZE)

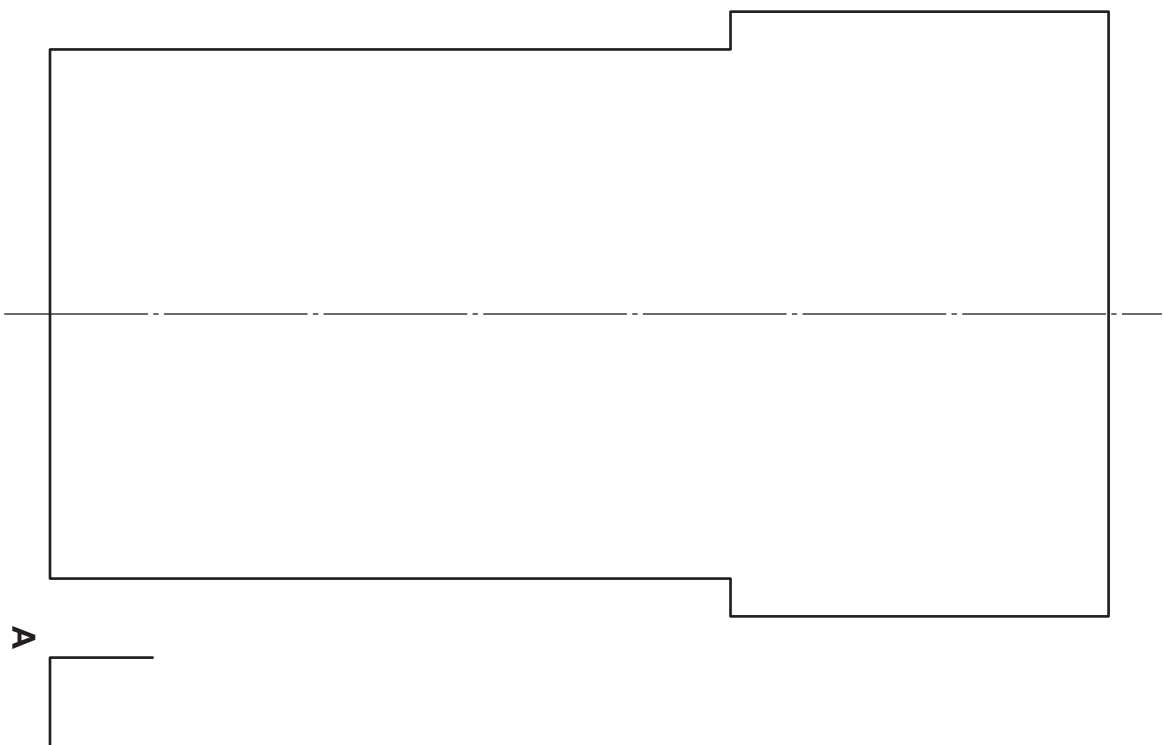
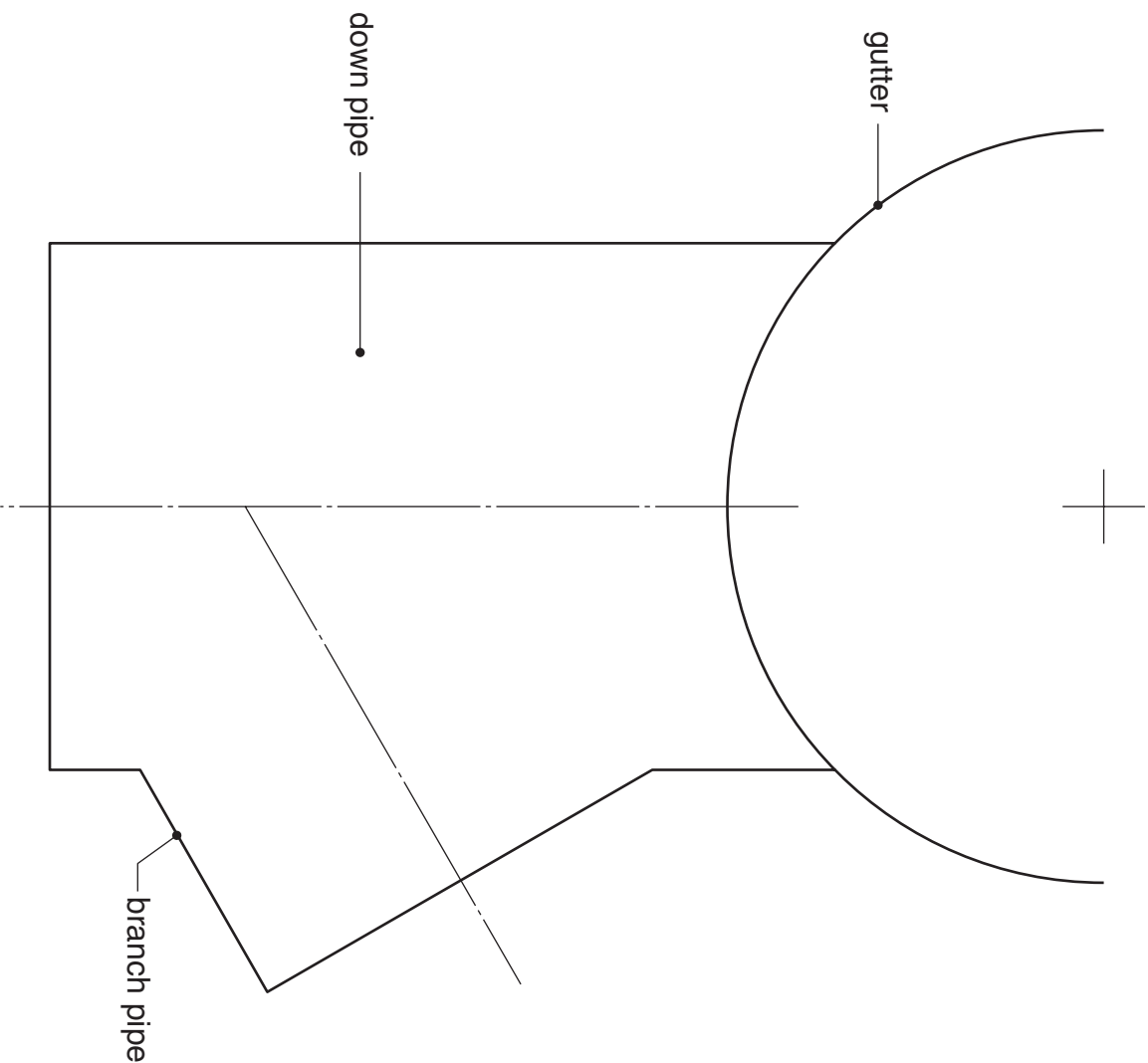
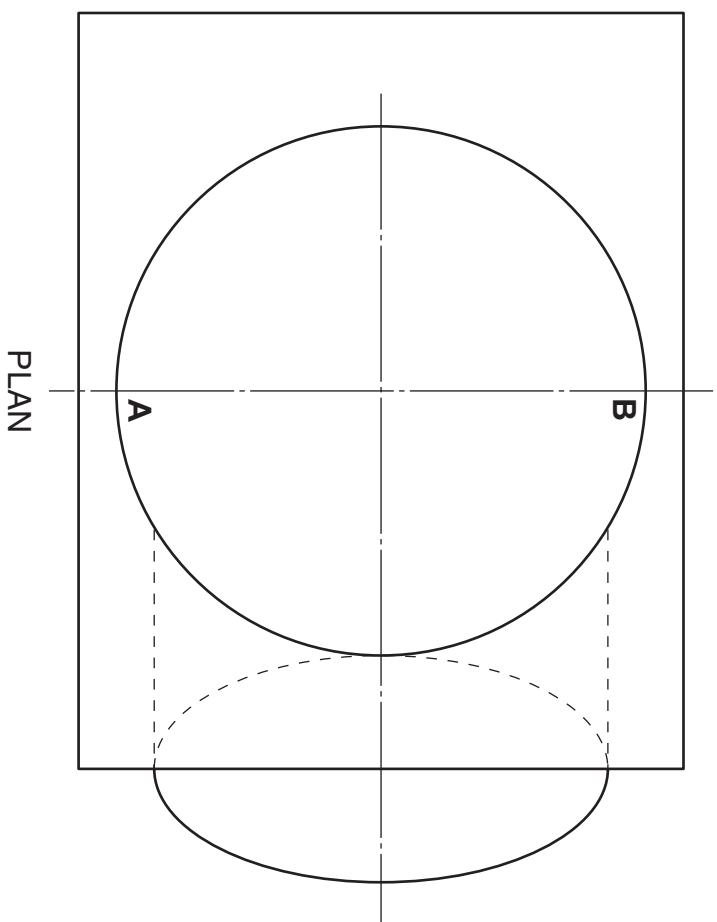


[X033/302]

SCALE 1:1 (FULL SIZE)

<i>a</i>	
<i>b</i>	
<i>c</i>	
<i>d</i>	
<i>e</i>	
<i>f</i>	
<i>g</i>	
<i>h</i>	
<i>i</i>	
<i>j</i>	
<i>k</i>	
<i>l</i>	
<i>m</i>	
<i>n</i>	

Candidate's Name _____



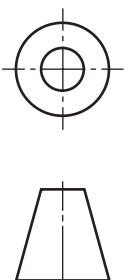
- The plan and two incomplete views of a gutter connector with branch pipe are given.
- Draw:**
- (a) the completed elevation;
 - (b) the completed end elevation;
 - (c) the development of the right-hand half of the down pipe from **A** to **B**.
Use start **A**.
- Show hidden detail.**
- (20 marks)**

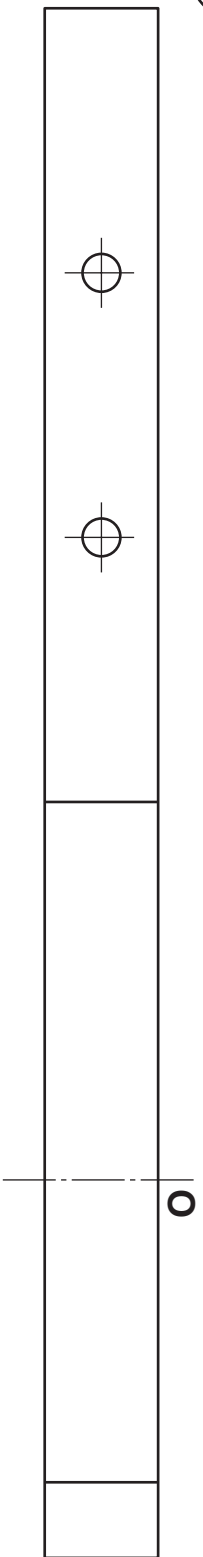
a	
b	
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m	
n	

DEVELOPMENT

END ELEVATION

ELEVATION





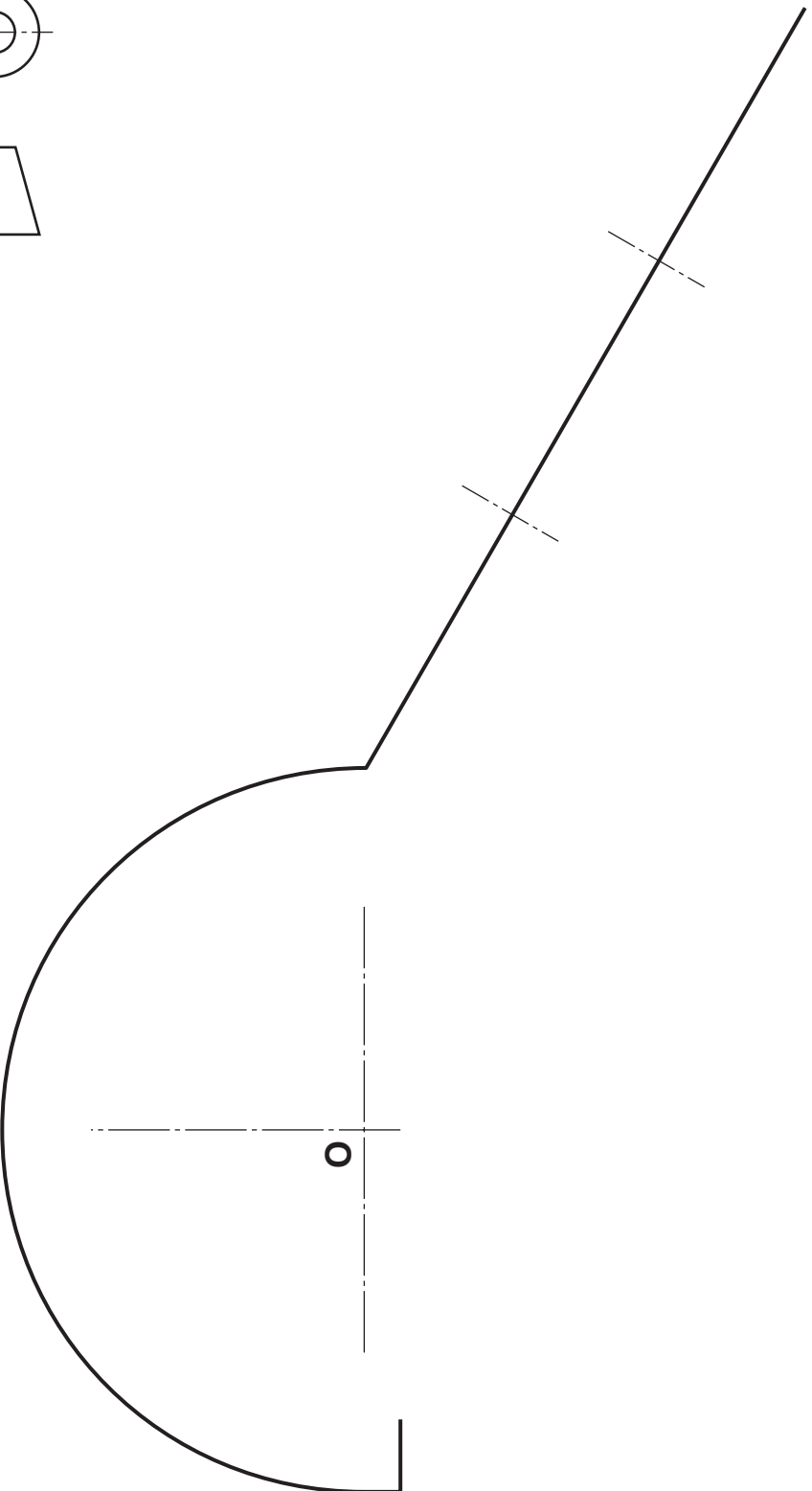
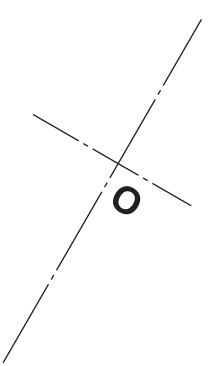
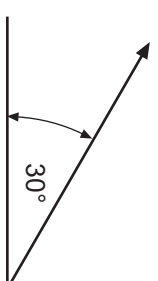
PLAN

The plan and elevation of a bracket for the gutter connector in Question 10(a) are given.
Draw an auxiliary elevation at the given angle.

(Note: The holes should be accurately located but may be sketched.)

Show hidden detail.

(10 marks)



ELEVATION

AUXILIARY ELEVATION

a	
b	
c	
d	
e	
f	
g	
h	
i	
j	
k	
l	
m	
n	

The elevation and end elevation of a small drawing office are shown.
Draw a **measured 2-point perspective** view of the drawing office.

The spectator point (SP), perpendicular plane (PP), ground level (GL), eye level (EL) and plan are given.

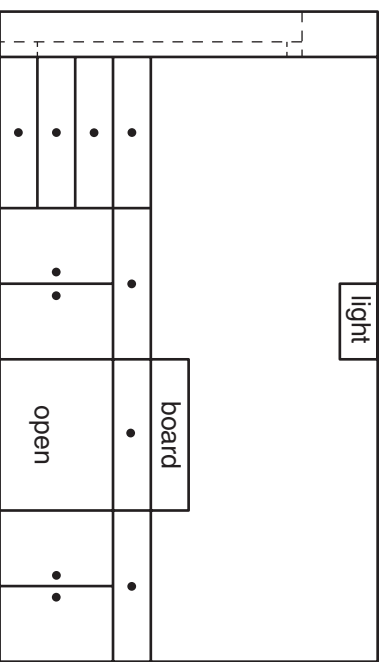
Do not show the handles of the doors and drawers.

Do not show hidden detail. (20 marks)

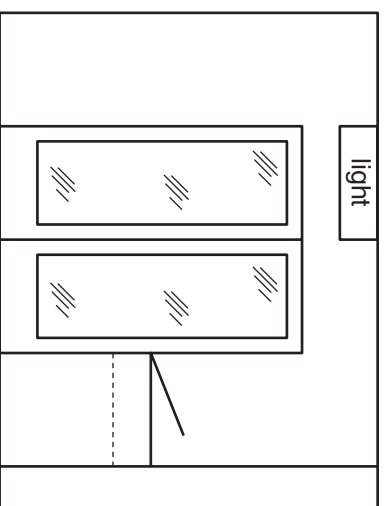
EL _____

GL _____

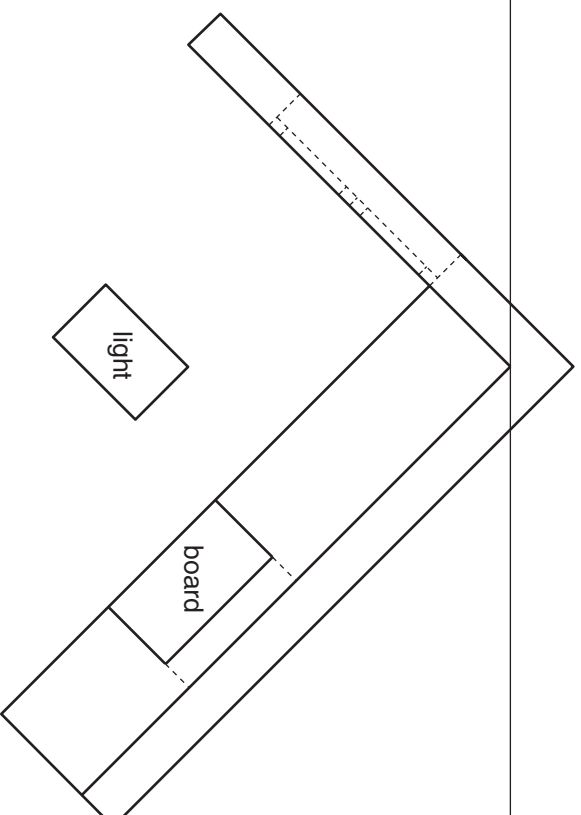
PP _____



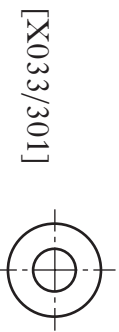
ELEVATION



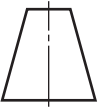
END ELEVATION



PLAN



[X033/3011]



SCALE 1:50

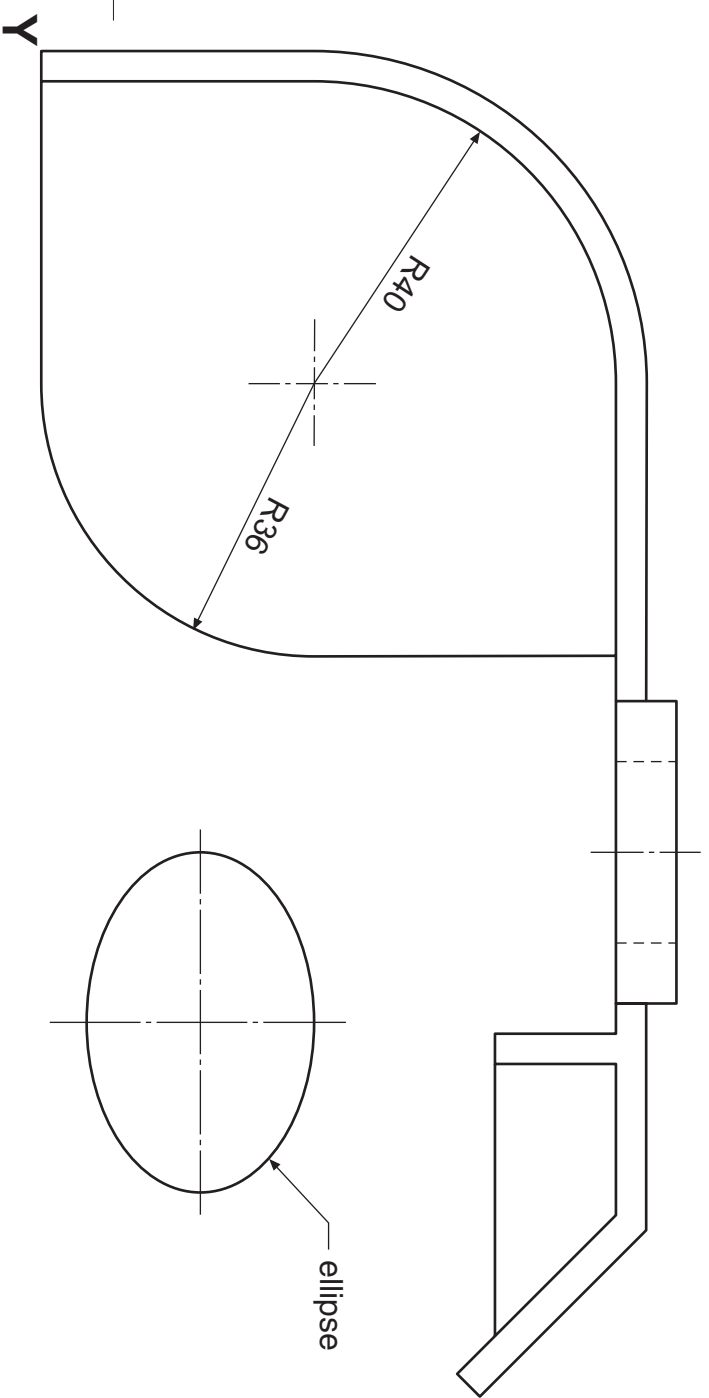
SP

a	
b	
c	
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k	
l	
m	
n	

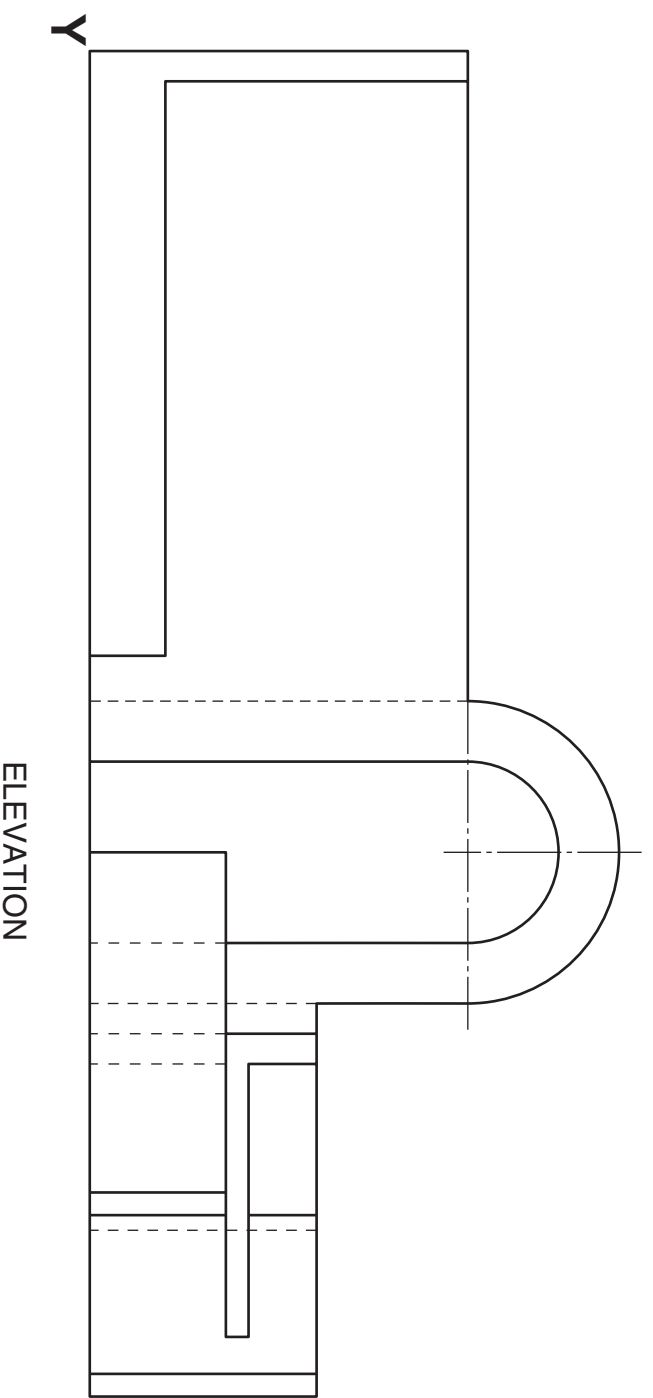
The elevation and plan of part of a walled garden with an arch, decking, elliptical table and barbeque area are shown.
 Draw a **planometric view** of the walled garden, arch, decking, elliptical table and the barbeque area using the given start point **Y**, and to the same scale.

Do not shorten the heights.
Do not show hidden detail.

(20 marks)



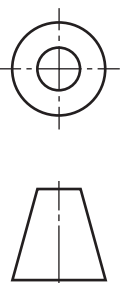
PLAN



ELEVATION

PLANOMETRIC

a	
b	
c	
d	
e	
f	
g	
h	
i	
j	
k	
l	
m	
n	



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