N5

Graphic

Communication

Duration – 1 hour and 30 minutes

Fill in these boxes and read what is printed below.

Full name of centre

Town

Forename(s)

Surname

Number of seat

Date of birth

Day	Month	Year		Scottish candidate number
D D	M M	Y Y		

Total marks – 60

Attempt ALL questions.

All dimensions are in mm.

All technical sketches and drawings use 3rd angle projection.

You may use rulers, compasses or trammels for measuring.

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.

1.

a) What type of alignment is used in the poster above? (1 mark)

Text alignment - centre justified.

Text at top & logo at bottom.

b) Name the effect indicated by the letter A. (1 mark)

Depth - layering.

c) What effect does this type of layout technique cause? (1 mark)

To bring items forward - the product.

Make them stand out, highlight or draw focus.

d) Unity is used in the presentation above. Explain how it is achieved and the effect it gives. (2 marks)

Red background & red bottle creates a link.

White text & white element in bottle.

Simple & effective colour scheme linked to the product and branding.

Student Fashion Association Present Their

SPRING
FASHION
SHOW
At Sacramento State

A BLACK & WHITE AFFAIR
A BLACK & WHITE AFFAIR
A BLACK & WHITE AFFAIR
A BLACK & WHITE AFFAIR

7:15PM Tuesday, May 15, 2007
University Union Ballroom
Doors Open at 6:45PM

$5 All Students w/ Valid ID
$10 General
$25 VIP (private after-show reception*)
all prices will go up $2 at door
*21 or older

B

e) What type of alignment is used in the layout above? (1 mark)

Text alignment - right justified.

Header at top aligned to top of model (Graphics).

f) What type of effect is shown by the letter B? (1 mark)

Reversing.

2. A group of school pupils were asked about their social habits. They were invited to answer questions on 2 topics; how they communicated with their friends and when they felt more awake during the day.

The answers they gave are shown below.

QUESTION 1	QUESTION 2
How do you communicate with your friends?	**At what time during the day do you feel more awake?**
Texting – 1300 pupils	10% - 9am – 11am
Social media – 1000 pupils	15% - 11am – 1pm
Talking on the phone – 300 pupils.	25% - 1pm – 4pm
Talking in person – 1500 pupils	10% - 4pm – 7pm
While playing video games – 500 pupils	40% - 7pm – 11pm

Based on the answers given to **QUESTION 1, How do you communicate with your friends?**

a) State the best type of graph to use when representing the information in the answers to **QUESTION 1**. (1 mark)

<u>Bar graph</u>

b) State one reason for using this type of graph. (1 mark)

<u>Used to show how different items & figures compare.</u>

Based on the answers given to **QUESTION 2, At what time during the day do you feel more awake?**

c) State the best type of graph to use when representing the information in the answers to **QUESTION 2**. (1 mark)

<u>Pie chart</u>

d) State one reason for using this type of graph. (1 mark)

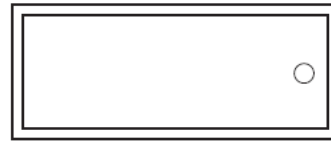<u>Shows the share an individual area has from a whole number or total.</u>

3.
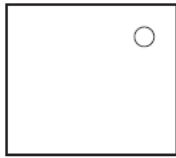
A
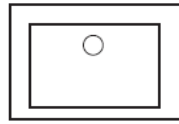
B

C

D

E

F

a) Above is a selection of building symbols.

According to British Standards, name each of the symbols shown. (6 marks)

A _____Shower tray_____

B _____Wash basin_____

C _____Bath_____

D _____Lamp_____

E _____Switch_____

F _____Socket_____

b) What is a CAD library? (1 mark)

It is a file / location with previously saved work accessible to save time & to
help with conventions and standardisation.

A file accessible with standardised symbols / parts conforming to BSI standards.

c) What is the difference between computer animation and computer simulation? (2 marks)

Animation can be more fun & less formal, where as, Simulation is as close to
real life scenario / situation as possible giving real time feedback.

d) Why do we use symbols in Graphic Communication to convey information? (1 mark)

To bridge or overcome language barriers, to save time obtaining information,
To create understanding & standardisation.

4.
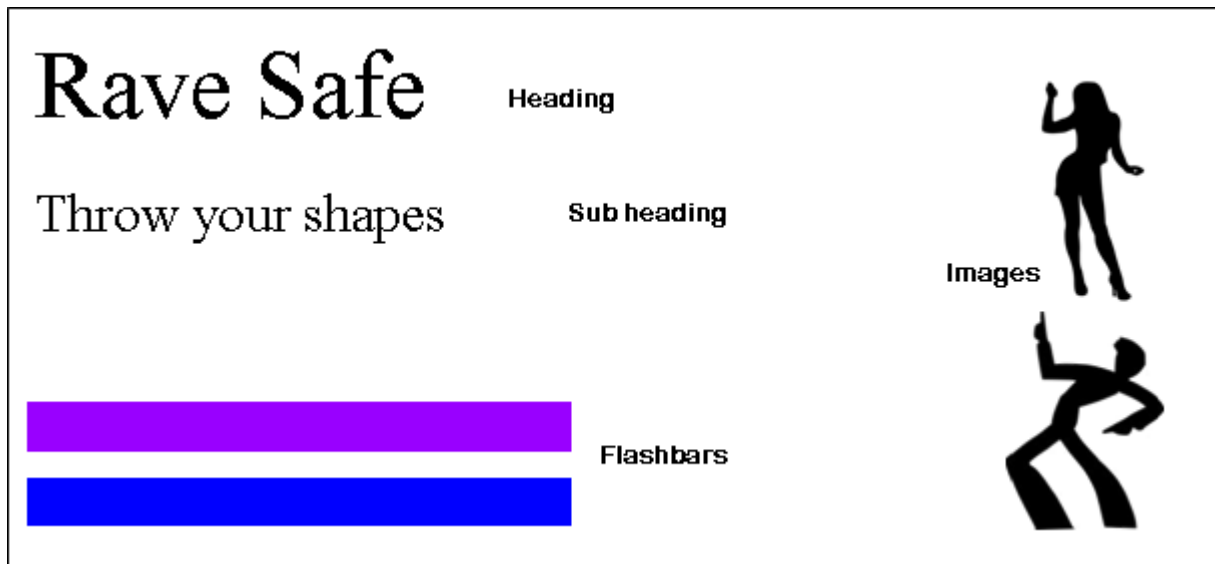
This example shows the design of a flier for a nightclub event. The original images and ideas are shown in the top example.

a) Name the DTP command used for the following areas. **Do not** name the same command more than once.

i) **Detail A** - The effect added to the heading. (1 mark)

Font or typeface, Drop shadow.

ii) **Detail B** - The changes to the images. (1 mark)

Mirror / reflection.

iii) **Detail C** - The format added to the sub heading. (1 mark)

Text flow along a path.

b) Give reasons for the following design features of the flier:

    i) Why was the font for the heading changed? (1 mark)

Not interesting, very bland, old looking.

    ii) Why was **Detail A** added to the heading? (1 mark)

To create depth to the page, make it standout.

    iii) Why was **Detail C** added to the sub heading? (1 mark)

To make more interesting, to create the idea of movement linking to dancing or beats of the music.

c) What is the reason the colours chosen for the flash bars? (1 mark)

To create a harmonious colour scheme with receding colours.

d) What is the purpose of using flash bars in the flier? (1 mark)

To create depth / layering to make the heading stand out - focus on the title.

5.

A cup in a cup holder that can be used at concerts is shown here.
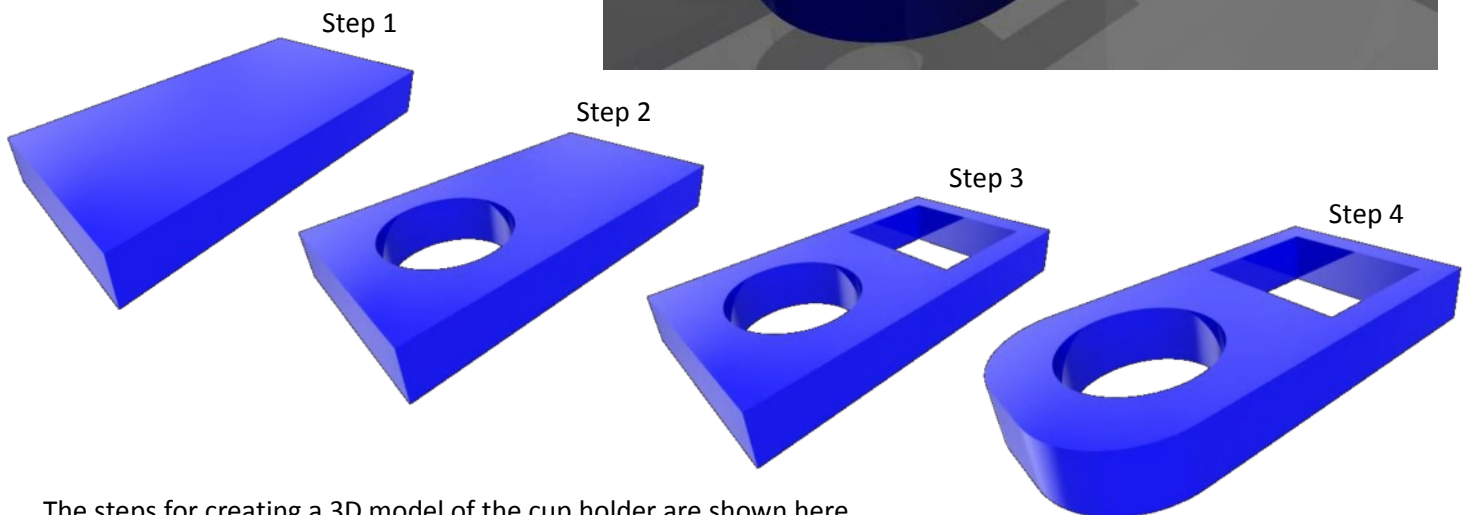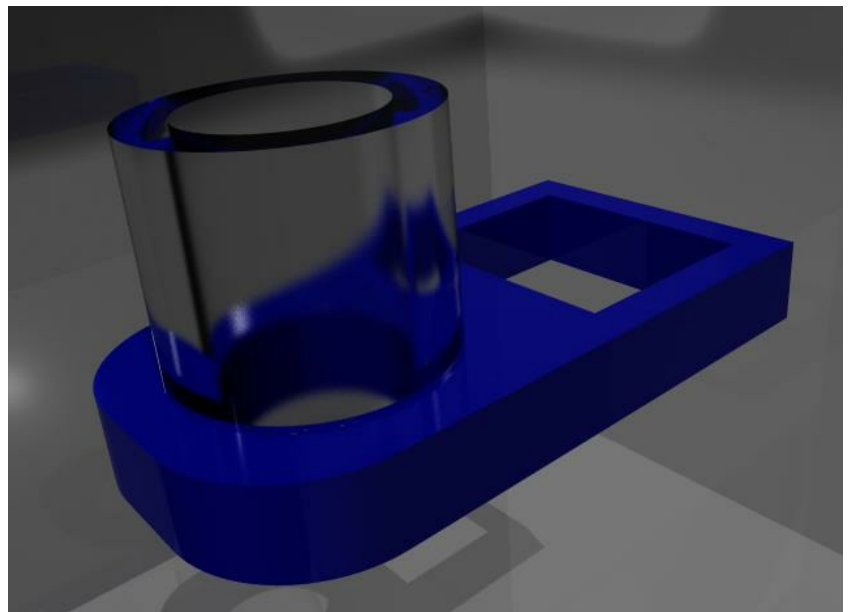
The steps for creating a 3D model of the cup holder are shown here.

a) State the 3D command used to create the hole at stage 2. (1 mark)

Extrude - subtraction.

b) Describe how you would create the cup holder from step 3 to step 4. You can use sketches to support your answer. (3 marks)

Look at the top surface,

Select fillet & select the relevant edges. Set fillet

size to 30 mm. Finish sketch.

Sizes taken from drawings on page 9.

The cup was produced by using the command shown below.
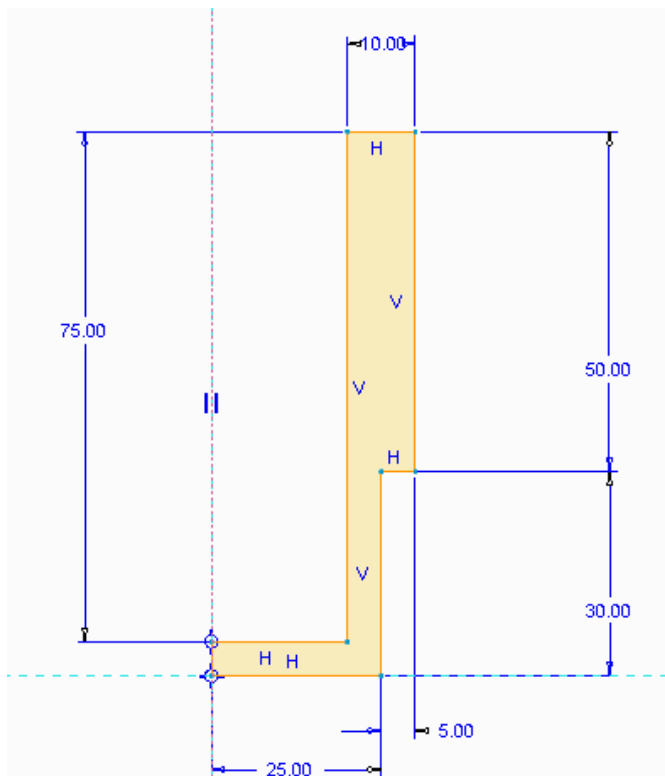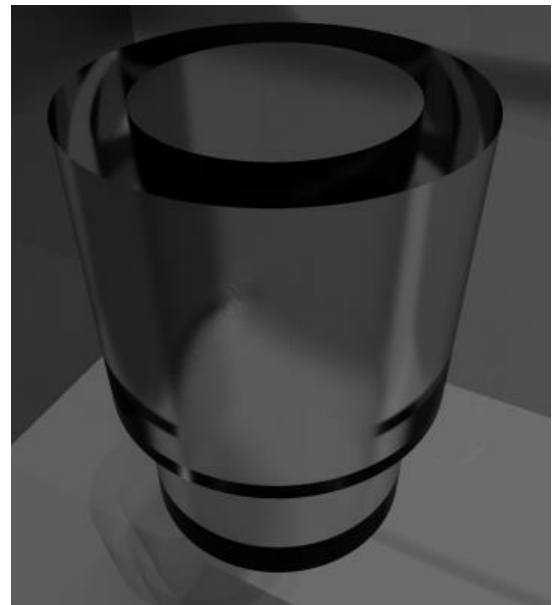
Stage 1 of the command.
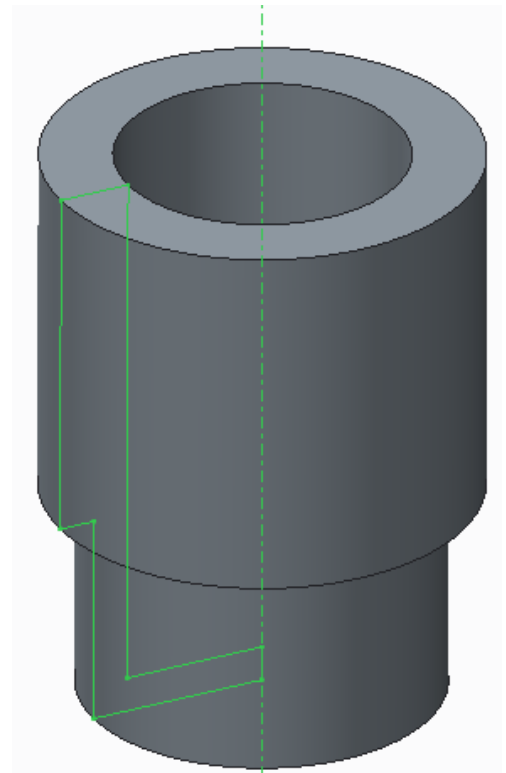
Stage 2 of the command.

c) State the name of this command. (1 mark)

Revolve.

d) The orthographic views of the cup holder are shown below. (6 marks)

Plan

Elevation

End Elevation
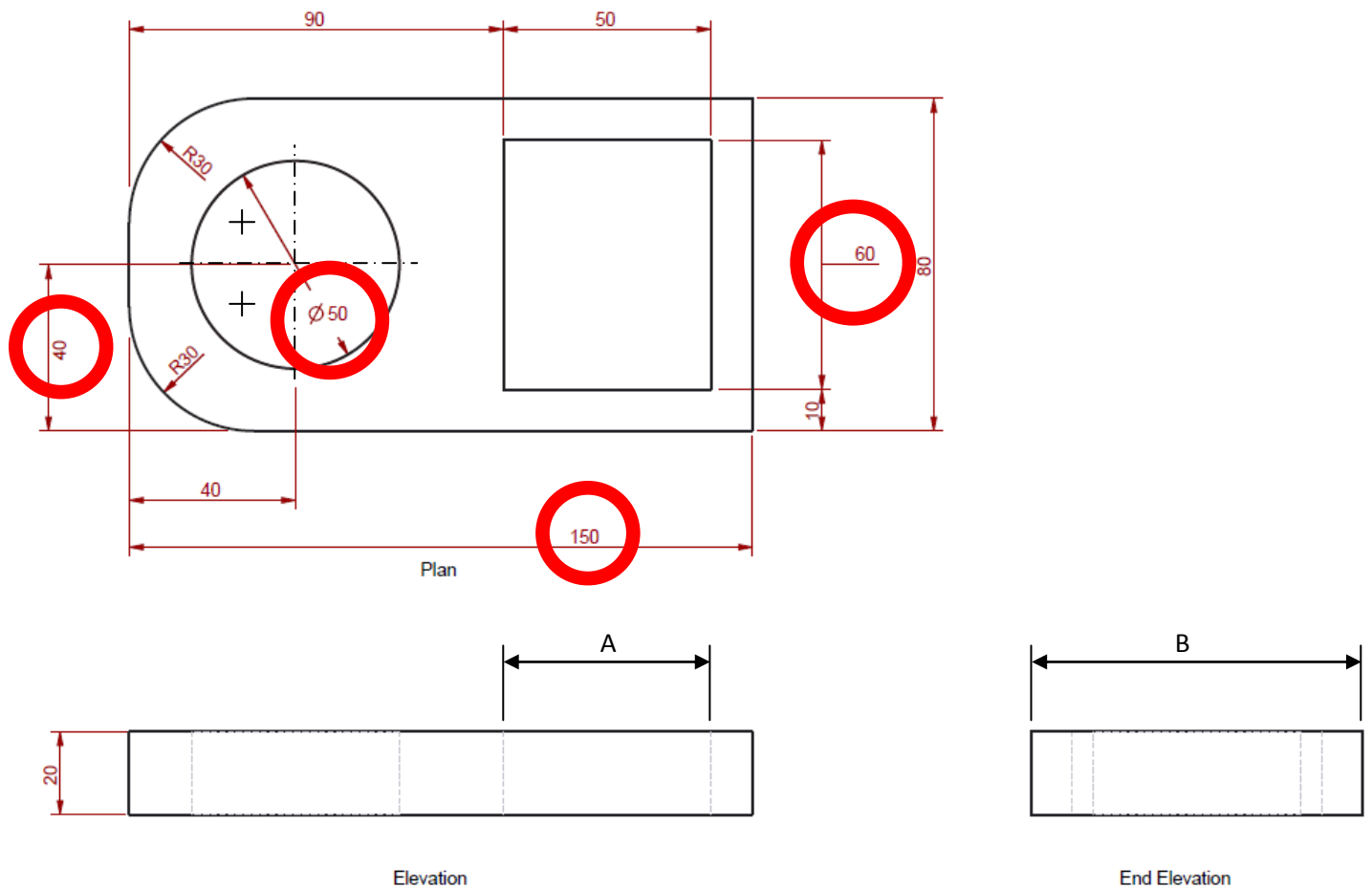
i) State the size of dimension A   50 mm

ii) State the size of dimension B   80 mm

iii) There are 4 mistakes with the dimensions on the Plan of the cup holder. Circle each of these mistakes.

e) Sketch the 3rd angle symbol in the space below. (1 mark)
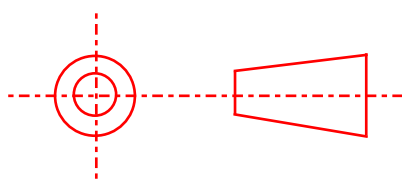
f) The company that produced the cup holder want to introduce a handle to help people carry 3 drinks at a time.

The preliminary sketches for one of the attachments that fit on top of this handle are shown below.

120   60

Ø20

120

60

150

300

PLAN

50

5×45°

ELEVATION

10

65

END   ELEVATION
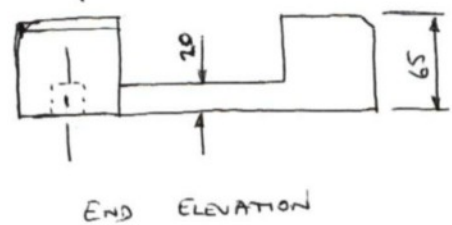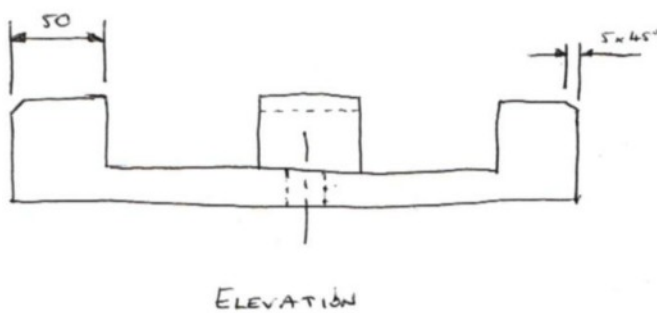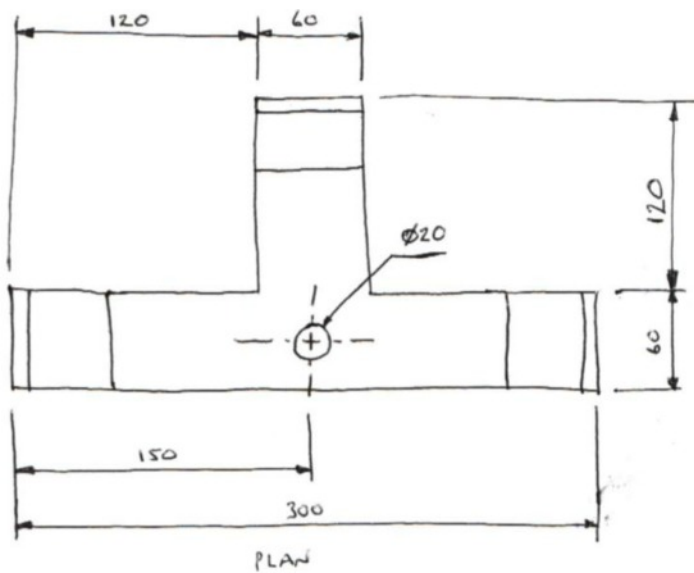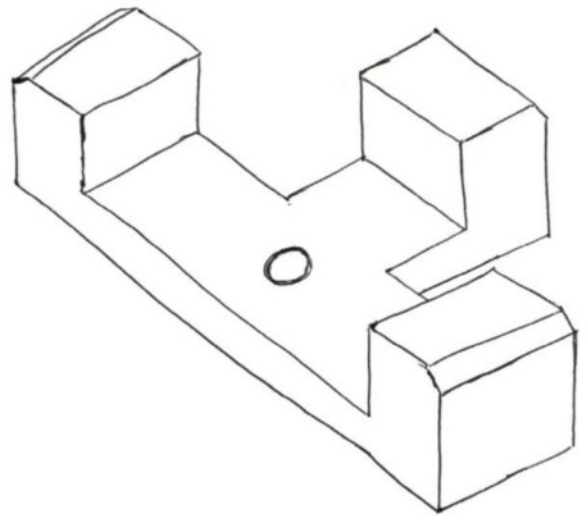
Describe how you would use 3D modelling software to create this handle. You may use sketches to help illustrate your answer. (6 marks)

There are a number of different methods to do this.

SKETCH THE PROFILE

DIMENSION THE PROFILE

EXTRUDE - ADDITION TO 65 MM

120   60

120

60

150

300

SKETCH & DIMENSION A BOX

EXTRUDE - SUBTRACTION TO 45 MM

130

200

SELECT FILLET & SELECT EDGES

SET FILLET TO 5 MM

SKETCH & DIMENSIONS A CIRCLE

EXTRUDE - SUBTRACTION TO 20 MM

Ø20

30

150
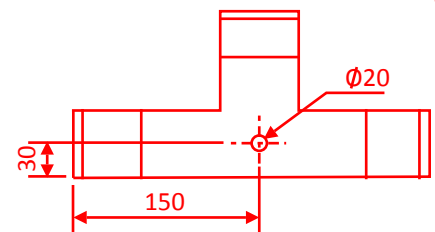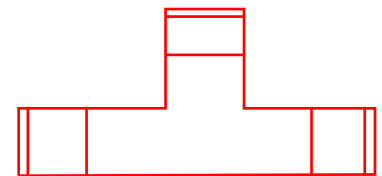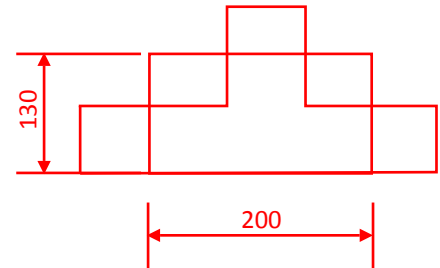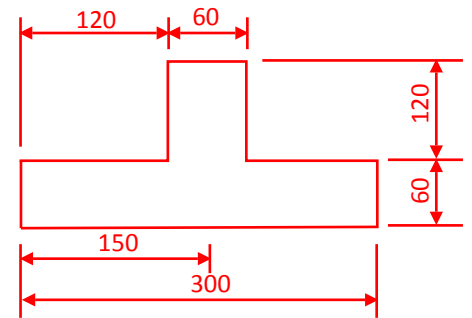
6.

a) State the name of the views shown here. (4 marks)

View A

Planometric

View B

Isometric

View C

Oblique

View D

2 - Point perspective

View A

View B

Angle X   Angle X

View C

45°

VP   VP

View D
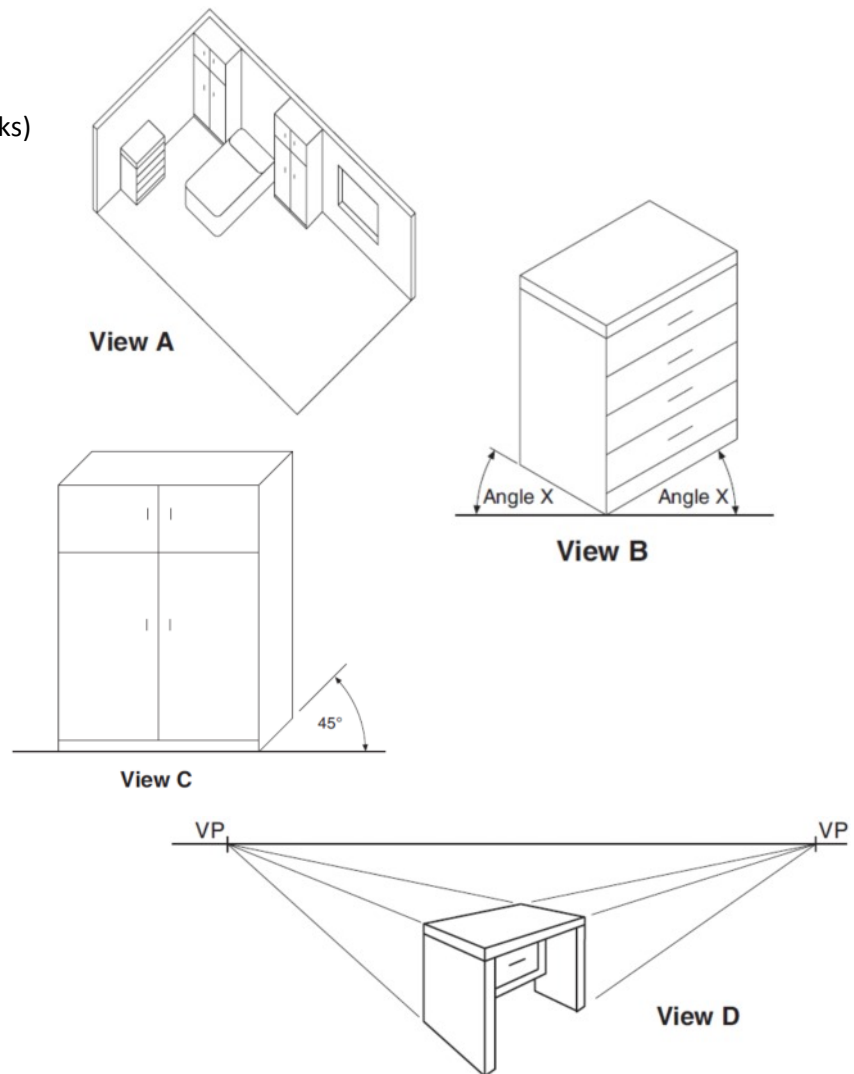
b) State the size of the angles X in View B. (1 mark)

30°

c) What is meant by a scale of 1:2? (1 mark)

The drawing is half the size of the real item.

For every 1 mm on the drawing then multiply it by 2 to get the real size.

7.

A pictorial view and a parts list of a cutting gauge is shown below.

Item Number	Title	Material	Quantity
1	Stem	Wood	1
2	Fence	Wood	1
3	Shoe	Wood	1
4	Threaded Inserts	Steel	1
5	Wing Screw M6 x 25mm	Steel	1
6	Knife Blade	Steel	1
7	Wedge	Wood	1
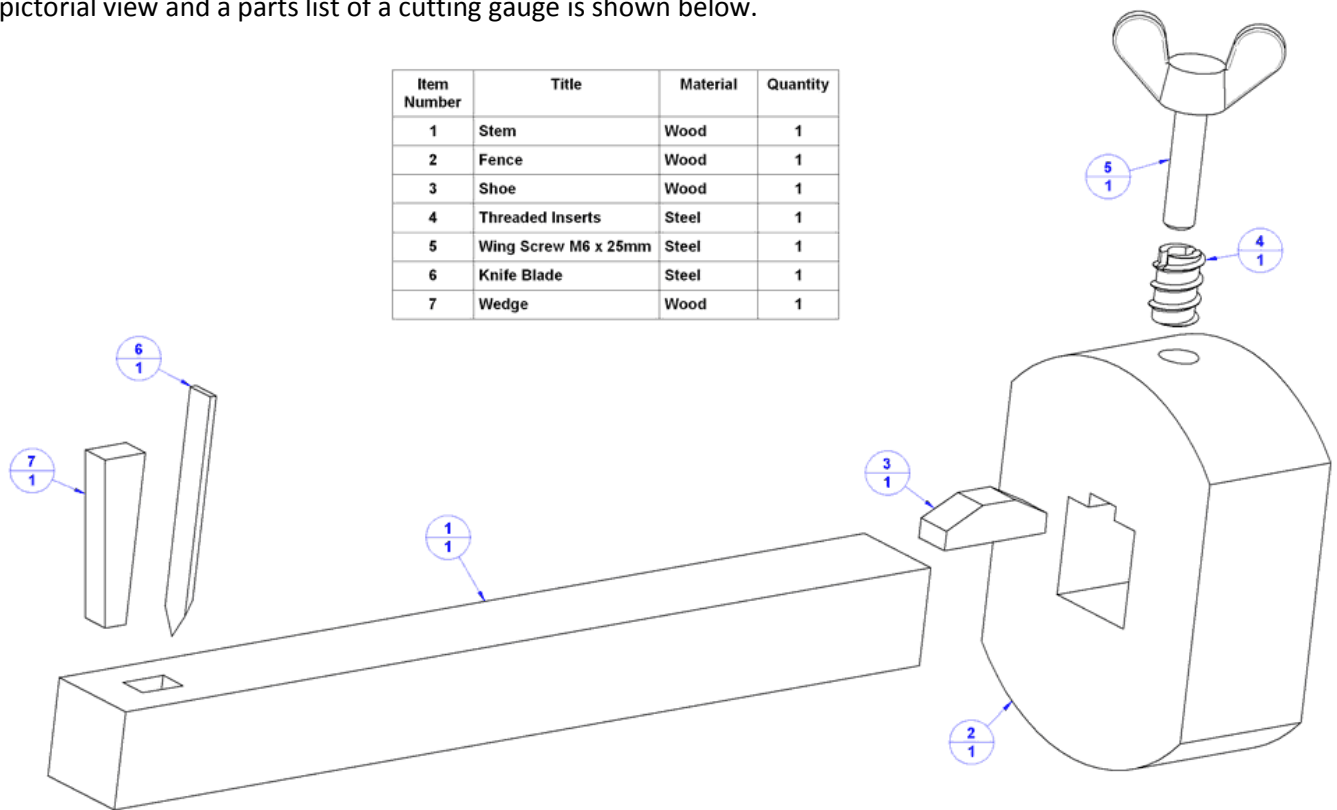
(a) State the name of this type of view. (1 mark)

Exploded isometric

(b) State the name of part 2. (1 mark)

Fence

(c) State the material the knife blade if made from. (1 mark)

Steel

(d) State the part number of the wing screw. (1 mark)

5

8.

(a) Below are orthographic views of a cut hexagon with the elevation missing. State the correct view from the choices below. (1 mark)

View _____ C

Plan
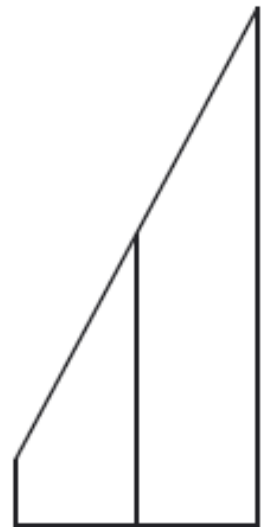
Elevation
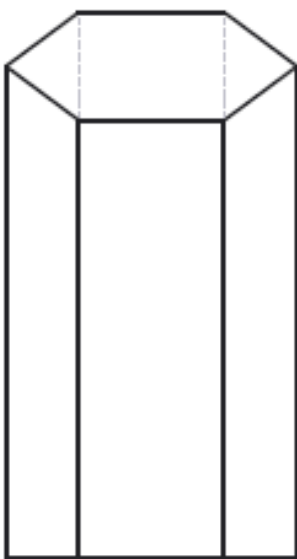
EndElevation

A
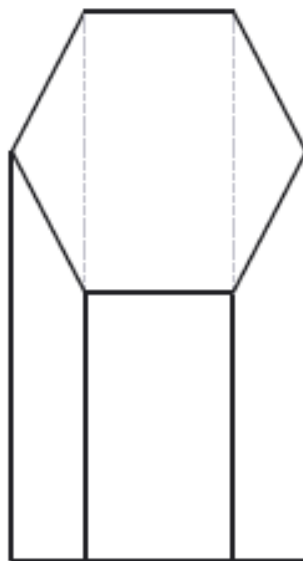
B
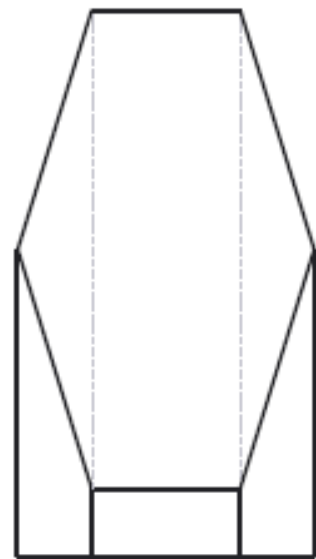
C

(b) Below are orthographic views of a cut pyramid with the elevation missing. State the correct view from the choices below. (1 mark)
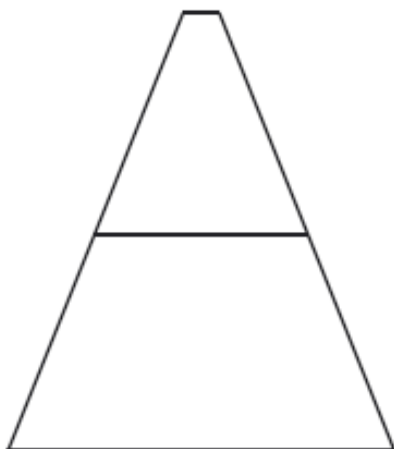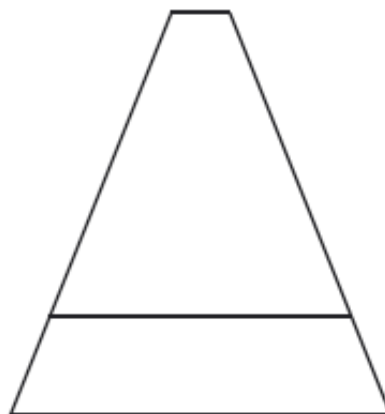
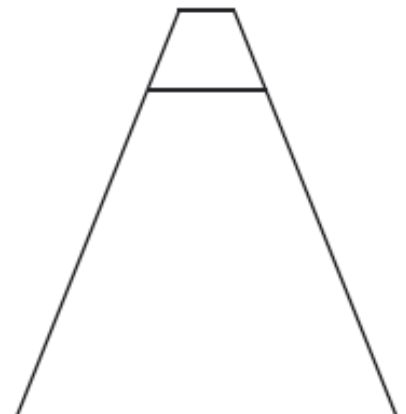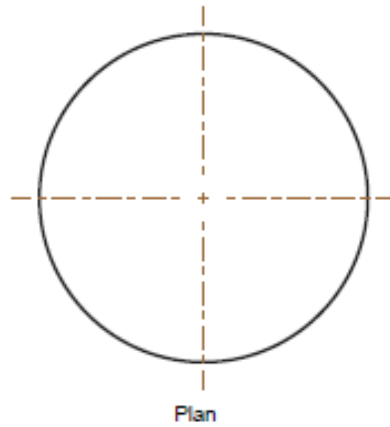View   <u>A</u>
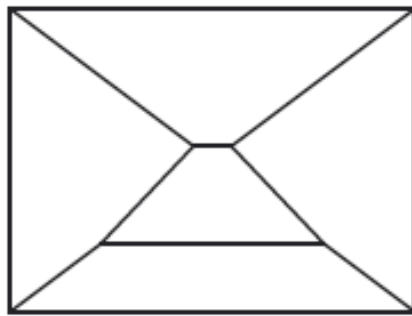
Plan
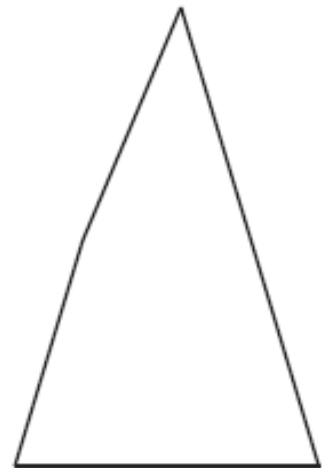
Elevation

End Elevation

A

B
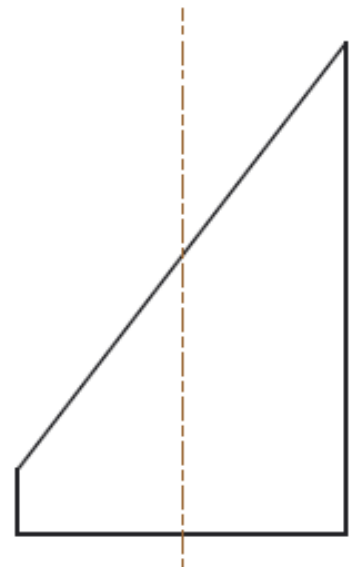
C

(c) Below are orthographic views of a cut cylinder with the elevation missing. State the correct view from the choices below. (1 mark)
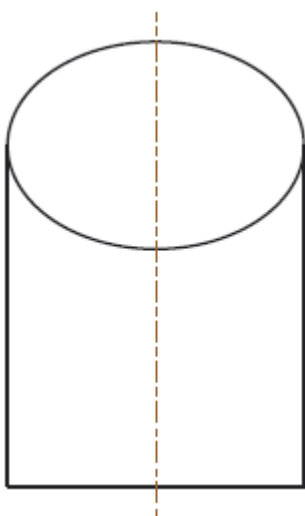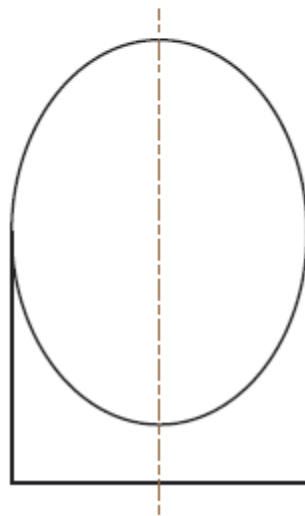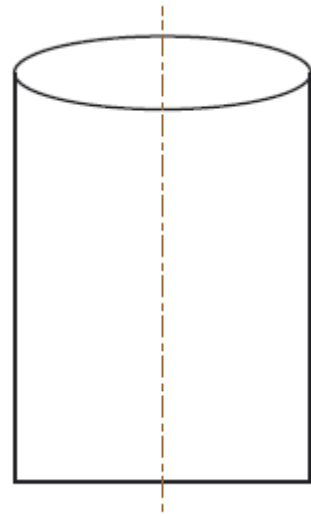
View ___B___

Plan

Elevation

End Elevation

A

B

C

[END OF QUESTION PAPER]