

*Fortrose
Academy*



Higher Graphics Homework Booklet

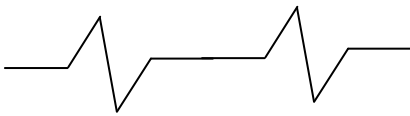
Homework 1

Q1. For each of the following lines name each and explain where it would be used on a drawing.

Used for visible outlines and edges



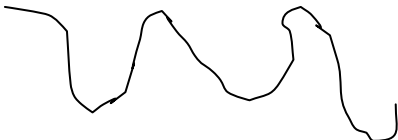


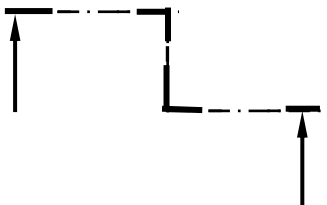




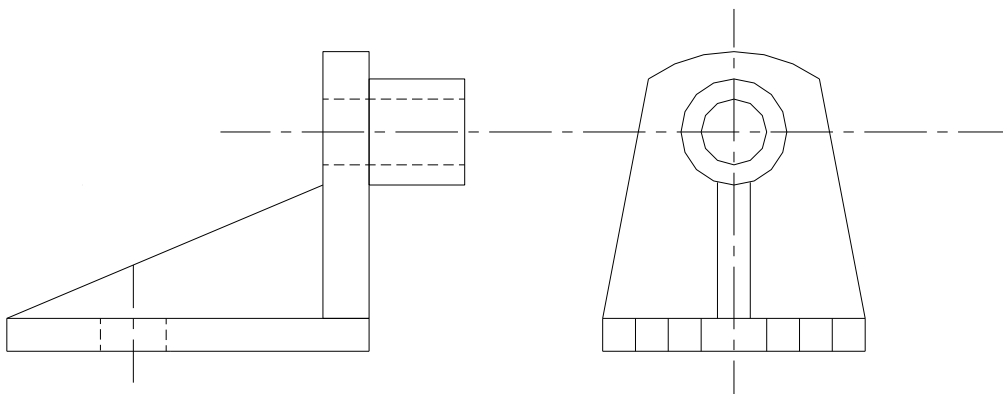
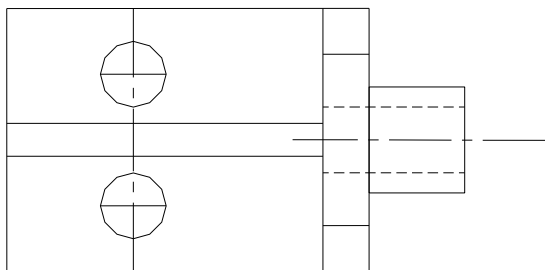


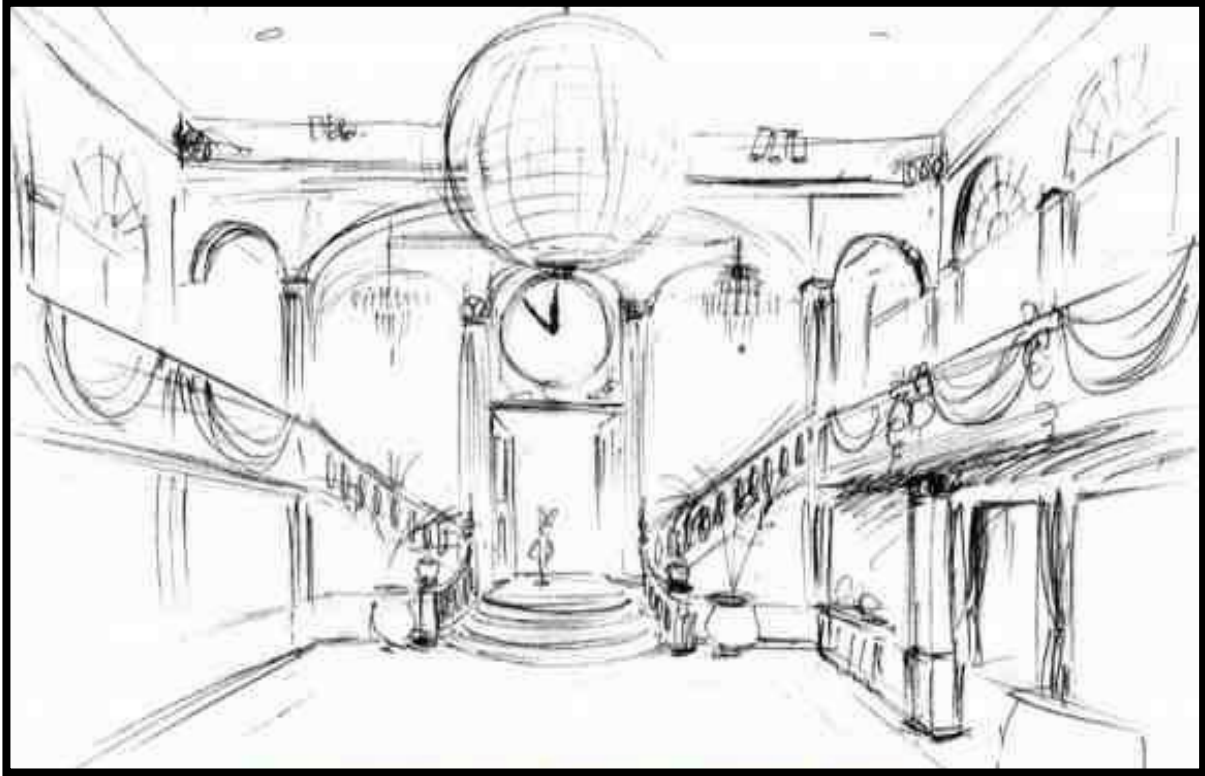






- Q2. Explain the purpose of applying tolerances to working or engineering drawings
- Q4. Tolerances can be applied to a drawing using two methods, what are these methods ?
- Q5. Using your knowledge of tolerances, apply the following tolerances to the drawing shown below.
- Q6. Angular dimension of 30mm applied to the web section, tolerance of plus or minus 0.10mm.
 Diameter of hole on plan of 10mm, tolerance of plus or minus 0.05mm.
 Radius of large circle on right side of 20mm, tolerance of plus or minus 0.10mm.





The graphics for the construction of a project fall into 3 main types: Preliminary, Production and Promotional.

Q7. State from the list above which the sketch shown falls into.

Describe the purpose of this type of graphic.

What will be the next stage in the process for the designer?

What will be the next stage in the process for the designer?

Homework 2

Q8. Describe fully the following illustration and presentation terms.

(a) Colour Gradients

(b) Text Highlight

(c) Make Up

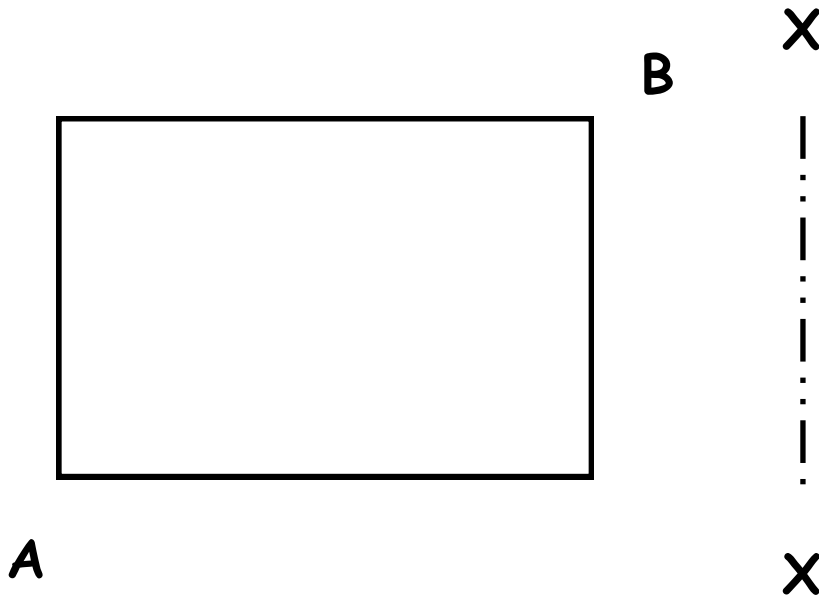
(d) Import

(e) Centre Spread

(f) Banner

Q9. State three factors which influence the choice of scale for a drawing.

Q10. An incomplete rectangle has been drawn using a CAD package. Sketch on the drawing the effects of applying the following CAD commands.



- (a) Fillet at A.
- (b) Chamfer at B.
- (c) Mirror the drawing about X-X.
- (d) Hatch the mirrored drawing.
- (e) In the space below fully explain the advantages of using computer aided drawing over traditional board work.

Q11. Using the desktop publication shown below, complete the table by using a ruler to measure the various features of the DTP publication.

(ii) On the page annotate two areas of "White Space".



Layout Feature	Size (mm)
Top Margin	
Gutter Width	
Column Width	
Right Margin	
Headline Height	
Graphic Width	

Q12. State the DTP term for the deliberately created clear area to the around the guitar on the left hand side.

Q13. State the DTP term for the page number at the bottom right of the publication.

Q14. State the DTP term for the orientation of this desktop publication

Q15. Describe the purpose of using a caption

Q16. State the DTP term for the large "Guitar Review" at the top left of the page.

Q17. DTP is used extensively in promotional graphics. Name at least 3 types of software package DTP publications are produced on.

1. Microsoft Publisher

2. _____

3. _____

4. _____

Q18. Explain the difference between the scales 1:2 & 2:1

what's on...

Your monthly guide
to the UK's premier
entertainment venue

Events at The O2



PARTY LIKE A V.I.P. IN THE O2'S BLUEROOM!

If you're heading to a show at The O2, make a proper night of it by taking advantage of some of the other things we have on offer, like the Blueroom bar.

The superb Blueroom bar is only open during arena events and is exclusively for the use of a limited number of O2 customers per night. If you had

BLUEROOM to 60202 while you're at The O2, you will be one of the lucky 200 people at every show to receive an electronic entry ticket to the bar. Don't worry if your phone went on O2, as everyone who bags a

Blueroom ticket can bring three friends with them!

The bar is filled with comfy sofas, chilled-out lighting, a jukebox with thousands of tunes and screens showing an ever-changing array of wallpapers. Get a picture you want to share? Text it to 60202 and we'll screen it on the walls. Plus, every night is different in the Blueroom as its theme changes to suit what's happening in the O2 that night, so you can enjoy a total event experience! (See Bar Themes for details.)

The Blueroom bar is just one of the exciting choices for O2 customers when you visit The O2. Make sure that you text BLUEROOM to 60202 and don't miss out!



BOOK NOW
The O2
Revels Square,
London, SE10 0DX
T: 0844 856 0202
theo2.co.uk/
insidebooknow

PRIORITY TICKETS

For a full list of what's on at The O2, text **INFO** to 60202. As an O2 customer you can get priority tickets to The O2 - visit o2.co.uk/theo2 to register

BLUEROOM: BAR THEMES

O2 Green Day
Over the top cocktail, cheesy tunes and classic arcade games!
O2 Eggs Dine
Sizzle the Blueroom with your favourite tunes and try our Deli Cocktail.
O2 Rock Takeover
From rock classics to modern arenaers, we'll be playing them all at the side Disco.
O2 Ten Zone
Set your pulse racing with a host of great games, such as football, golf and darts.

O2 Great Pop
Get ready to party in the Blueroom bar with our popstar disco!
O2 The Legends
Enjoy pre-event performances of all-time classics from our live jazz trio.
O2 For The Family
Make us ready for and popcorn and be the best-late partners in the business with their magic.
O2 Soda Sessions
Call out in the Blueroom bar to a live acoustic set. Enjoy a glass of wine and a massage from an O2 angel!

LAST CHANCE TO BOOK FOR...

12 August
Henry Rollins
From hardcore punk to acting and writing, Rollins has done it all. Catch his spoken word show at night.

THIS MONTH

19 August
Mysteries of Tutankhamun Revealed
Egypt's chief archaeologist Zahi Hawass shares the latest exciting discoveries at this lecture in night.



NEXT MONTH

6 September
Steve Windsor
Now is the time to book for an evening of intense basketball action as Great Britain takes on the Czech Republic at The O2. An absolute must for fans of this thrilling sports event.



11, 12 & 30 September, 1 October
Steve Windsor
The musical icon that is Steve Windsor is touring Europe for the first time in nearly ten years. Don't miss this rare chance to see a genuine legend in action, playing all of his greatest hits at The O2.

COMING SOON

14 October
Liam Neeson
The final night of Liam Neeson's All The Lost Souls UK tour is guaranteed to be one to remember.

BOOK NOW FOR
Canadian rockers
Nickelback, eighties
ska faves **Madness**,
and the timeless Tina
Turner. To book go to
theo2.co.uk/
insidebooknow

Homework 3

Q19 Please refer to the **"Events at the O2"** leaflet (*over/leaf*)

Identify and describe three **Design Principles** that make an impact to the reader

Principle 1 _____

Description

Principle 2 _____

Description

Principle 3 _____

Description

Q20 Please refer to the **"Events at the O2"** leaflet (*over/leaf*)

Annotate the leaflet to show

Footer

Bleed

Headline

Gutter

Reverse Text

Rule

Q21. Please refer to the “Events at the O2” leaflet

Identify and describe four **Design Elements** that make an impact to the reader

Elements 1 _____
Description

Elements 2 _____
Description

Elements 3 _____
Description

Elements 4 _____
Description

Leaflet for use with Question 22 (AH 2012)

SIDE•ONE

Something for All Seasons

Seabirds nesting, gannets diving, dolphins leaping, chicks hatching, seal pups snoozing – no two days are ever the same at the Scottish Seabird Centre!

Spring
The seabirds arrive on the islands and courtship begins. Gannets, guillemots, razorbills, terns, kittiwakes all arrive, with the puffins always last to appear! The first eggs are spotted in late March. Spring and summer is the best time to look out for dolphins and whales.

Summer
One of the highlights of the year, when the seabirds are rearing chicks. There are over 150,000 gannets on the Bass Rock and thousands of puffins on the islands. Check out our SOS Puffin campaign at www.seabird.org to save the puffins on the islands.

Autumn
The gannets are feeding chicks, many at the large white fluffy stage. In late autumn, the first winter visitors arrive along the shore and overhead the skies are filled with geese.

Winter
As the last gannets leave, the grey seals arrive to give birth to their fluffy white pups. A wonderful winter spectacle. Lots of winter waders, ducks and geese can be seen along the shore and overhead.

Opening Times
Open All Year - except Christmas Day
April - September
Monday - Sunday 10.00am - 6.00pm
February, March and October
Monday - Friday 10.00am - 5.00pm
Saturday - Sunday 10.00am - 5.30pm
November - January
Monday - Friday 10.00am - 4.00pm
Saturday - Sunday 10.00am - 5.30pm
Last admission to Discovery Centre and Café 45 minutes before closing.

Save time and buy your tickets online at www.seabird.org

Easy to Get To!

BY TRAIN
The quickest and most environmentally friendly way to travel. Great value package includes return train ticket, plus a day pass for the Centre.
Tel: 08457 550033 or www.firstgroup.com/scotrail

BY BUS
Regular bus services operate from Edinburgh (service no 124/XS) run by First Bus 0870 6082008, from Haddington (no 121 run by First Bus) and from Dunbar (no 120 run by Eve Coaches 01368 865500).

BY CAR
Only 25 miles/ 40kms from the centre of Edinburgh and less than an hour from the English border, the Scottish Seabird Centre is signposted from the A1, north and south. Parking will be refunded with your admission ticket.

Full disabled access, facilities and parking, children's facilities and baby changing. Guide dogs welcome.

Take Home a Toy Puffin!
when you visit our Discovery Centre
One puffin per paying ticket.
Please complete the following to receive your free puffin and/or T1 off our Guide Book.
Just write your home town
And tell us where you picked up your leaflet

Get Closer!

At the award-winning Scottish Seabird Centre

PICK UP YOUR FREE PUFFIN!
See inside for details plus £1 OFF our guide book.

SIDE•TWO

A Fantastic Day Out!

There's nowhere else like it in the world!
A world leader in wildlife viewing and winner of more than 20 major awards...

A Journey of Discovery

www.seabird.org

From the Seabird Centre's stunning location, overlooking the sea, you'll experience a close encounter with nature to remember. An all weather attraction. Descend into the exciting Discovery Centre with amazing live Cameras, Wildlife Cinema, Kids' Zone, saltwater Aquarium, Environment Zone and Migration Flyway. Open all year, there is also a Gift Shop, Café with open decking, boat trips to the islands... plus a packed programme of events!

"The Bass Rock, only one of the wildlife wonders of the world" Sir David Attenborough

Relax and Unwind
Enjoy delicious food and drink all day in our Licensed Café with open decking and panoramic views over the sea and beach. Home-baking and home made specials. Food and drink served all day.

Retail Therapy
You're guaranteed to find something different in our attractive Gift Shop. Speciality gifts, local arts and crafts, wildlife and green souvenirs. Paintings and prints in our Gallery.

Fantastic Value!
Become a member and enjoy free entry all year. Special events and offers, discount in our Shop and Café and boat trips. Join online at www.seabird.org or upgrade to membership on the day you visit and we'll refund your admission. As an education and conservation charity, we depend on our members to survive.

Seabird Safaris to the Islands!
Get on board our Seabird Safari Boat Trips around the islands and find out about our SOS Puffin Project to save the puffins. For the experience of a lifetime, you can book our photographic trips, landing on the Bass Rock. Call 01620 890202 or visit www.seabird.org for more information.

Homework 4

Q22. Using the “**Scottish Seabird Centre – Get Closer**” leaflet.
Identify **three Design Principles** that are used in the leaflet, and describe how they are used.

Design Principle 1

Description:

Design Principle 2

Description:

Design Principle 3

Description:

Using the “**Scottish Seabird Centre – Get Closer**” leaflet.
Identify **three Design Elements** that are used in the leaflet, and describe how they are used.

Design Element 1

Description:

Design Element 2

Description:

Design Element 3

Description:

Leaflet for use with Questions 23 (AH 2013)

SIDE•ONE

Interactive development

Kasey Jarvis' seemingly bottomless treasure trove of ideas, as well as his deep knowledge of 3D modelling, was of course more than welcome at Nike. "I have always understood 3D and found it natural to work and think in that way," he says. "At school I learned how to draw using the computer. I also had an idea about at home and experimented with a joystick in order to draw more freely. Today, with all the amazing programs for design and visualization available on the market, the possibilities are endless."

Seraphic challenge

The idea - making a "patchwork" shoe from waste material turned out to be a smart decision, but the challenges were great and when the Canadian Nike pro Steve Nash first showed interest, the concept was taken to the next level.

"We understood that the shoe was destined if only we designed it right. We wanted great optimum sizes for the patches, with a variety of colors and textures all carefully stitched together. In such large design

Tips and Tricks

Custom UCS

- In Fig 1 we have a simple shape. To construct a spout we have to add 3 work planes and then place the sketch on it and extrude the feature to the body of the shape, as in Fig 2.
- The problem comes when you want to change the feature, perhaps move it away or rotate it. It can be done but can be some what cumbersome.
- But, if the same feature is built using a Custom UCS, things become very easy. With the same file we click on the custom UCS icon, (Fig 3). Then place by clicking on the screen or using the coordinates input boxes for X, Y and Z placement, (Fig 4).
- Now when we create our feature we can use any of the work planes associated with the Custom UCS (Fig 5).
- It becomes very easy to move or rotate the feature, simply right click on the Custom UCS icon and select "REDFINE FEATURE", then you can drag the icon in any direction via the arrow head and rotate by dragging any of the arrow shafts. (Fig 6/7) When the icon has been repositioned, right click and select "FINISH".

The model will re-build itself instantly and update the feature (Fig 8). Easy!!!

Create

OCTOBER 09 // ISSUE 08

Explore new ways for students to visualise their ideas with Animation Academy

Encourage creativity, critical thinking and problem solving with Design Academy

Trash Talk - the evolution of the green trainer from Nike

animate / innovate / develop / create Autodesk 05

animate / innovate / develop / create Autodesk

animate / innovate / develop / create Autodesk

SIDE•TWO

Welcome...

Welcome to your new look autumn edition of Create magazine. This edition has been revamped based on your feedback and we hope you find it a useful and informative piece. Read on to find out more about the new secondary school solutions now available and how these will help you inspire students to think creatively, independently and pro-actively. Learn how Autodesk is being used by leading sports brand Nike and finally, get the latest tips and tricks for Autodesk Inventor.

Autodesk Animation Academy 2010

Autodesk Animation Academy 2010 is an innovative and exciting software bundle that delivers four powerful 3D applications for one affordable price. This effective learning tool creates an intersection between core subjects and the arts, enabling students to learn the technology while exploring new ways to visualise their ideas.

Autodesk Animation Academy introduces students to professional tools and creative career options, whilst:

- Encouraging creativity, critical thinking, and problem solving.
- Supporting achievement in art, design, and animation.
- Blending traditional and digital creative learning into a seamless solution.
- Exploring industry workflow and processes.

Autodesk in Industry

Best Foot Forward

When the NBA (National Basketball Association) stars started playing basketball in footware made from recycled material, commercial success for sports shoe manufacturer Nike was likely to follow.

Creating such a novel 'green shoe' concept involved 3D technology from Autodesk, as well as smart marketing and a vast research & development effort.

02 Create www.autodesk.instructor.co.uk

animate / innovate / develop / create Autodesk 03

04 Create www.autodesk.instructor.co.uk

Q23. Using the “Autodesk Create” leaflet.
Identify **three Design Principles** that are used in the leaflet, and describe how they are used.

Design Principle 1

Description:

Design Principle 2

Description:

Design Principle 3

Description:

Using the “Autodesk Create” leaflet.
Identify **three Design Elements** that are used in the leaflet, and describe how they are used.

Design Element 1

Description:

Design Element 2

Description:

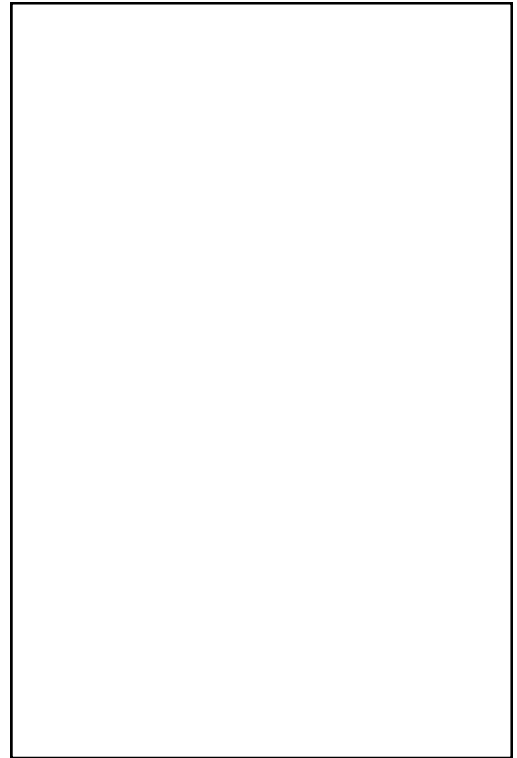
Design Element 3

Description:

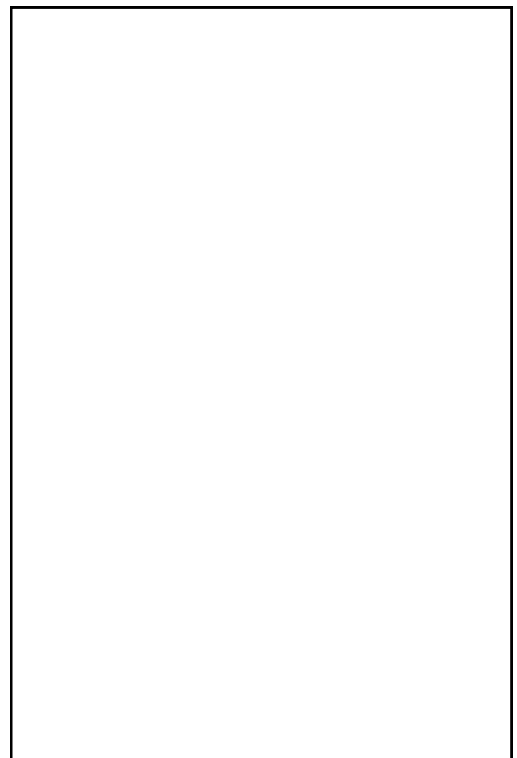
Homework 5

Q 24. There are three main types of balance used in DTP publications.
(AH 2013). In the space below, state and sketch two DTP balances.

(a) Balance:



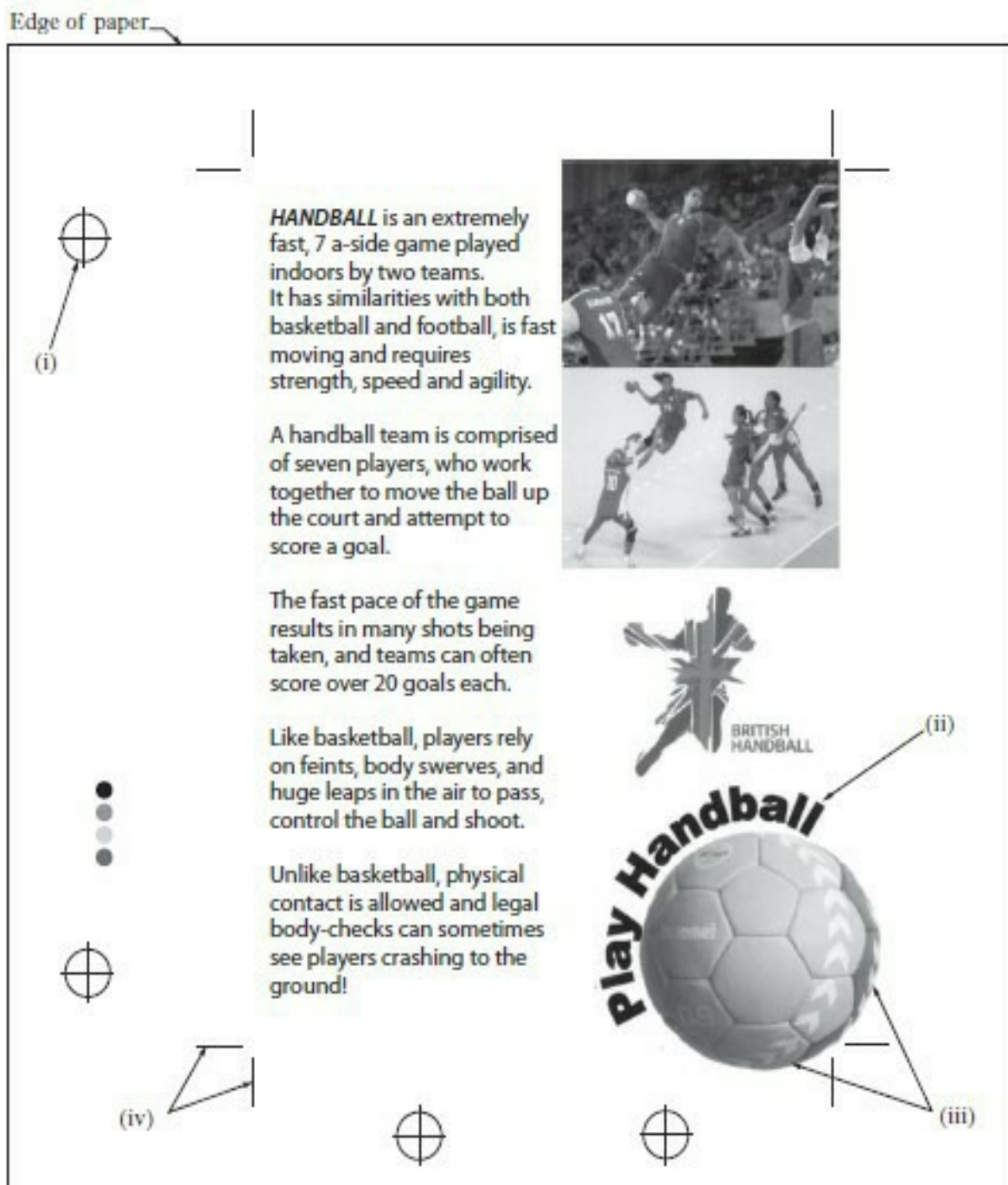
(b) Balance:



Q25. An advertising leaflet for the game of handball, ready to be sent to the printers, is shown below.

Correctly identify the features arrowed in the leaflet.

- (i) (ii)
- (iii) (iv)





ORDIEQUISH

Start here if you're looking for easier routes, but also the Gully Monster and some longer routes – something for everyone!

The Soup Dragon

Grade – MODERATE

This is just pure fun – a fun packed friendly route that can be enjoyed at any level. You're in control! Just one catch – you first got to go up! Don't worry, your climb up will be well rewarded. [It's soup time!] Want just a bit more? Keep climbing for an add on – 'The Dragon's Tail' Allow 45 mins – 5 km (3 miles) round trip from the car park.

The Haggis

Grade – MODERATE

You just want more don't you? You want to meet The Haggis. This beastie, well known for running around mountains has lately taken up mountain biking. He calls it progress. A great trip – full of interest – loads of fun, a fair distance but not too technical. The Haggis Connection is your gateway to Ben Aigan if you really fancy a long day.

Gordzilla

Grade – MODERATE

A strange beast, twice the size of any man, who builds trails through the wood when you're sleeping. Gordzilla gave up eating mountain bikers and now survives on porridge. A great flowing route – cruise it or ramp it but you'll certainly enjoy it. As with others here, can be linked to others like The Haggis. Allow 1 hr.

The Gully Monster

Grade – SEVERE

An awesome trail of monster proportions! You won't have ridden anything quite like this before. Full of technical interest. This isn't your domain – this is the home of the Gully Monster.

Skills Area

Just up from the Ordiequish car park. Learn more advanced bike skills here – Bank a berm, take on a tabletop and blast a bomb hole. Hone your technique and transfer it to the trail like an expert.

WHITEASH

– Winding Walks Car Park

The Fochabers Ring

Grade – DIFFICULT

A varied and full-on cross country trail you'll want to ride again and again. A 'no pain, no gain' climb up to the monument and then the fun starts. A sense of adventure – essential; Hobbi's hairy feet – optional! To complete the Ring is a fair outing of around 8 Km.

Fochabers Freeride

Grade – EXTREME

This trail is for advanced riders only.

No matter how good you are – **WALK IT BEFORE YOU RIDE IT!** Initially built almost entirely by volunteers, this is where the whole Monster Trails project started. Follow 'The Ring' to the monument and then prepare for some very wild and scary riding! The top section of the Freeride trail includes big technical 'northshore' wooden structures. Please make sure you're capable of this style of riding – most of us aren't.

The second section is big earth features, drops and jumps. After section 2, join 'The Ring' back to the car park.



Looking out along the Spey valley from Ben Aigan

KEY TO MAP

Trail Start

Cycle Trail

Riding direction

Car Park

Car Park (charge)

Camping Site

Caravan Site

Toilets

Refreshments

FC Woodland

Non-FC Woodland

Main Road

Secondary Road

Other Road

Railway

Road / Track

Enjoy Scotland's outdoors responsibly

- take responsibility for your own actions
- respect the interests of other people
- care for the environment.

KNOW THE CODE BEFORE YOU GO

www.scotlandscotland.co.uk



Looking out the Gully Monster



Don't - be an off-roader!

NOTE - FOR SAFETY. ALL waymarked cycle trails MUST BE RIDDEN ONLY IN THE DIRECTION SHOWN.

Trail problems?

You're out there, so if you see any problems that need fixing – let us know (see Money and Aberdeenshire FD contact details).



Volunteers getting ahead of trail building

BEN AIGAN

The Ben Aigan Hammer

Grade – DIFFICULT

Wow. A knock-out from The Hammer. One long big hit ride around the summit of Ben Aigan with stunning views of the Spey valley. Big earth features, and even board walk sections. Finish off with the Mast Blast or Bunny for the full Ben Aigan experience. (The trail is often affected by winter weather).

The Mast Blast

Grade – SEVERE

A rushing downhill just beyond the big transmitter mast. Time to rock and roll! Deceptively speedy, with jumps. Check your speed and expect the unexpected. Spin City follow on: Hit the forest road and turn right. Don't miss the marker to take you off right to more single track switchbacks all the way back to the car park.

The Bunny

Grade – EXTREME

What a thumper. Fast, free and furious, this trail has it all. Could it be the thinking rider's downhill? The name!! Don't ask! When you hit the road, turn right, keep climbing... and link with Spin City section of Mast Blast.

Starting or finishing in Craigellachie

Starting – head up the Speyside Way into the forest past Ardilly (but don't bring the car – there's no parking). Follow the waymarkers that climb steeply up to join the Hammer. Now you're up here – make a day of it!
Finishing – waymarkers point you off the south end of 'The Hammer' towards Craigellachie.

QUARRELWOOD

A taster easy cross country route, a short ride from Elgin. Practice your skills here and then head up to the main trails around Fochabers. This route is less formal than the main trails and for waymarkers you need to follow the white quartz rocks. Start in the Leggat car park – West end of the forest or from the Brumley Brae car park if you're cycling from Elgin. See map. This is a busy used by walkers so please keep everyone happy and follow the code.



Q26. Design Elements/Principles have been given below.

Please refer to "**Moray Monster Trails**" leaflet.

For the terms below:

- circle to show whether a Design Element or Design Principle;
- describe with direct reference to the leaflet, how the design element or design principle has been used in the leaflet.

(i) **White space**: Design Element/Design Principle

Description:

(ii) **Balance**: Design Element/Design Principle

Description:

(iii) **Shape**: Design Element/Design Principle

Description:

(iv) **Colour**: Design Element/Design Principle

Description:

(v) **Contrast**: Design Element/Design Principle

Description:

(vi) **Value**: Design Element/Design Principle

Description:

Q27. There are three stages in planning a DTP document prior to the production of the final electronic version. Research is the first stage.

State **two** further stages in planning a DTP document.

AH 2012

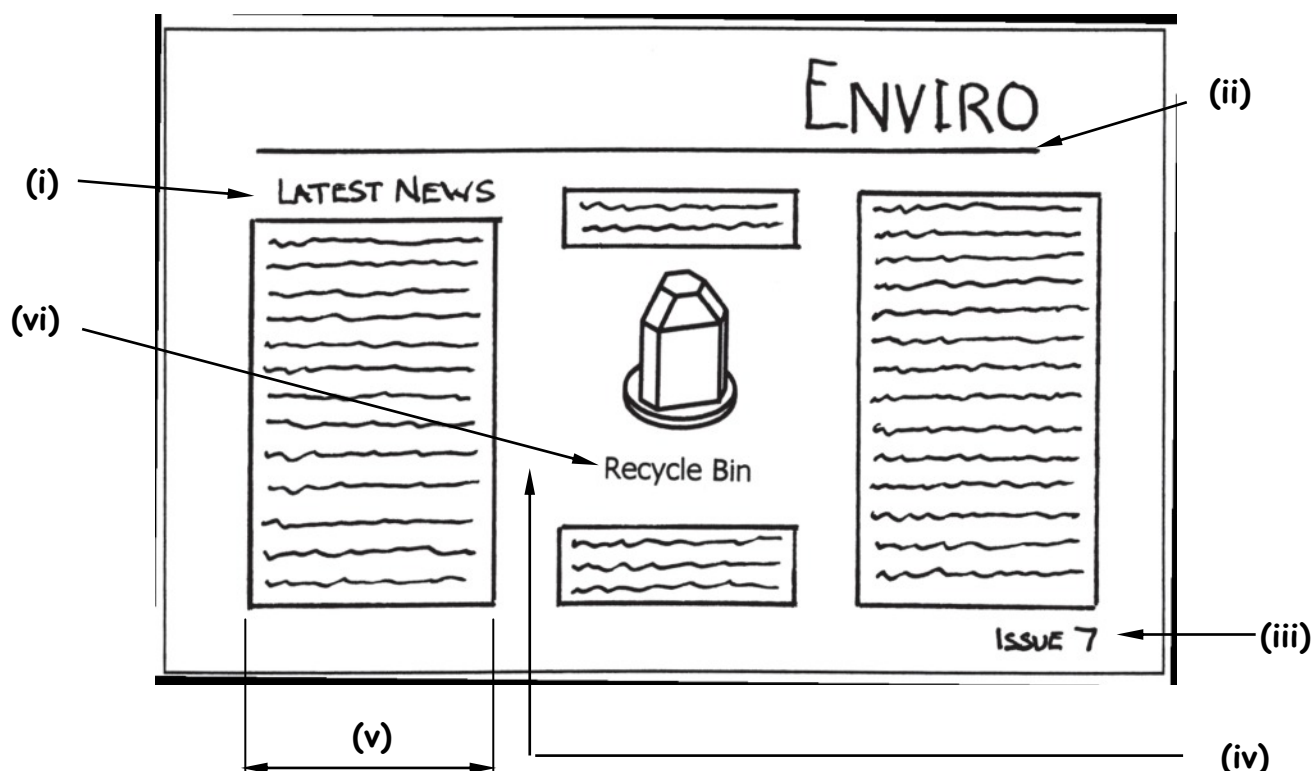
Stage

Stage

Part of the planning stage is shown above.

State the page orientation used in the document above.

.....



State the DTP term for the deliberately created clear area to the left of the word ENVIRO.

.....

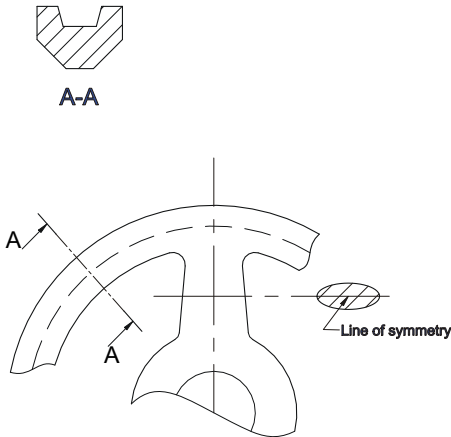
State the DTP term for each of the features (i) to (vi).

(i) (ii)
 (iii) (iv)
 (v) (vi)

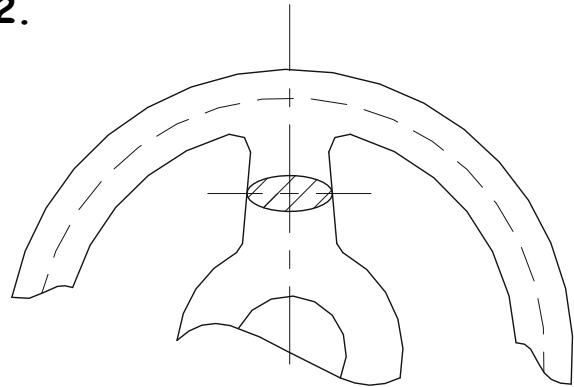
Homework 6

Q28. Name the three types of sectional drawings shown below.

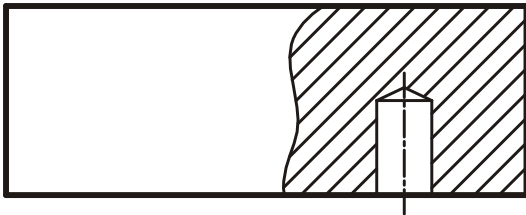
1.



2.



3.



1. _____

2. _____

3. _____

Q29. Identify the parts of the sectioned drawing shown opposite.

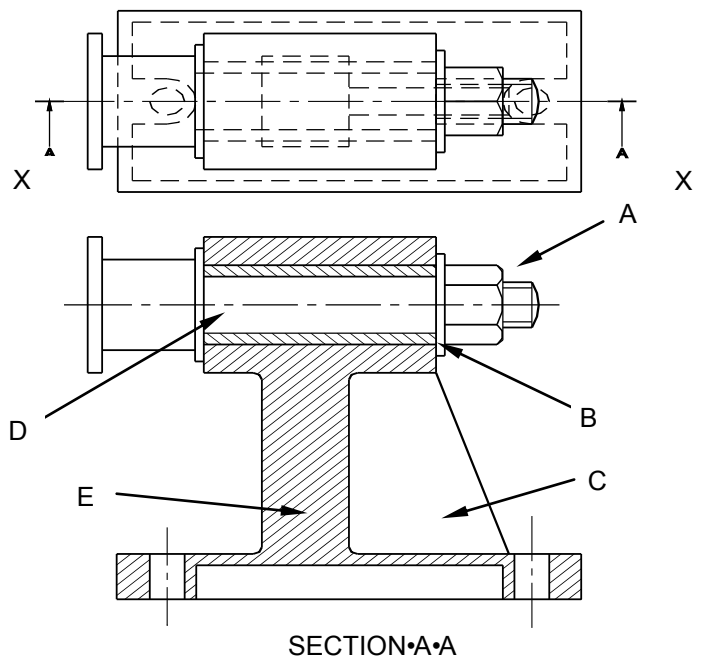
(A) _____

(B) _____

(C) _____

(D) _____

(E) _____



Q30. Name two devices that can be used to input photographs to a computers memory for use in a DTP document.

(a)

(b)

Q31. Compare the benefits of using each device.

(a)

(b)

Q32. Describe the process of transferring CAD drawings to a DTP document.

Q33. State the fastest method of electronically sending a DTP document accurately over a distance.

— - — — —

Q34. What piece of computer "hardware" allows this information to be sent electronically?

M — — — —

Q35. Write a short statement describing each of the following processes associated with computer graphics/

(a) Copy and Paste

(b) Cut and Paste

- Q36. In the box below, draw a series of "thumbnail sketches" for your new book "My autobiography." These sketches should show a variety of ideas of how you plan your front cover, back cover and spine to look. Be as creative as possible!

Thumbnails

Q37. In the box below, complete your section of thumbnail sketches by adding a "visual" (Working Rough) This will be your best design from your thumbnail sketches. A good quality drawing is required.

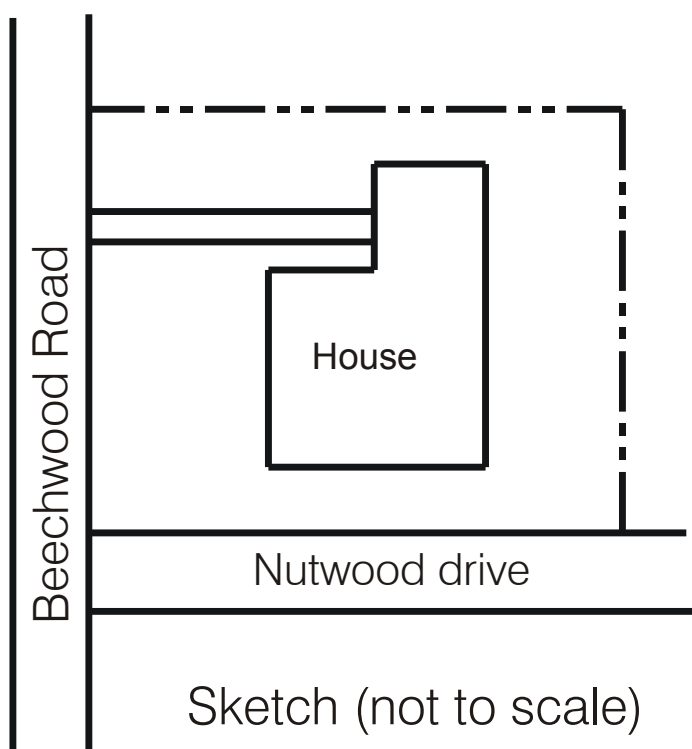
Visuals (Working Rough)

Homework 7

Q38. *Block plans, site plans and floor plans* are all building type plans.

(i) State an appropriate scale for a site plan _____

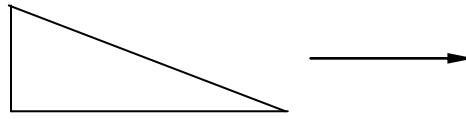
(ii) A sketch (not to scale) of a site plan showing a building, boundary and roads is given. List four other features which could be included on this plan.



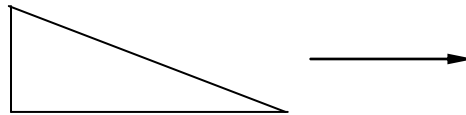
Q39. A production drawing is used in the manufacture of an object. State four pieces of information required on the drawing for the accurate manufacture of the object.

Q40. Sketch what happens to the give graphic when the CAD command is applied to it.

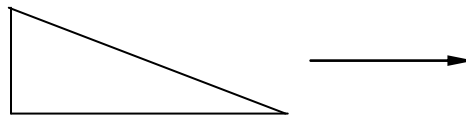
(a) Rotate (90 °)



(a) Scale (down)



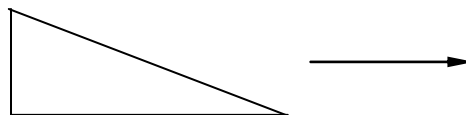
(a) Hatch



(a) Copy



(a) Mirror



(a) Zoom (out)



Q41. State **two** benefits of using the CAD feature, **Library**.

(a) Advantage 1 _____

(b) Advantage 2 _____

Q42. An Architect wishes to draw the Floor Plan of a house. He has a choice of two scales.

(a) State which two scales are the two common scales for drawing a floor plan.

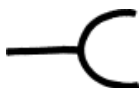
Scale 1 _____ Scale 2 _____

(b) State two reasons which might influence his choice.

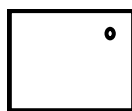
Reason 1 _____

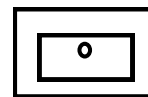
Reason 2 _____

Q43. Name each of the British Standards symbols shown below..





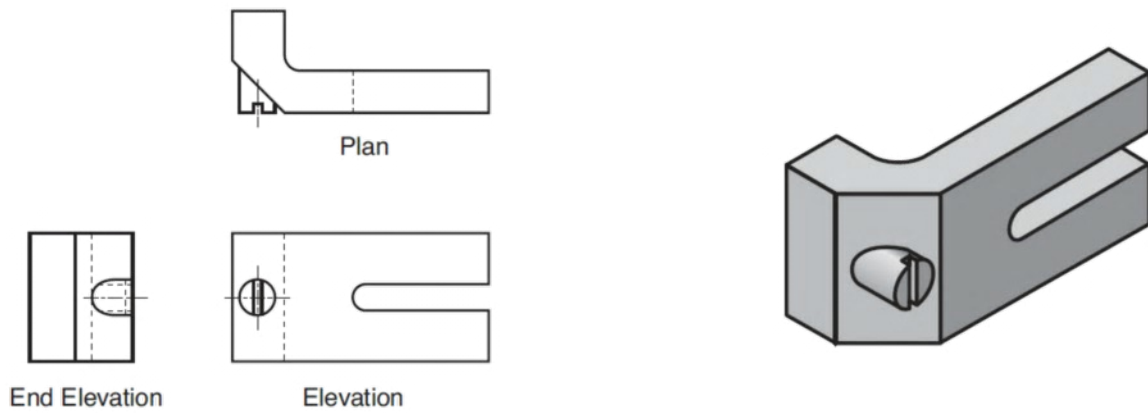






Q44. Orthographic views of a drawing board bracket are given.

With the aid of sketches, explain how a 3D solid model of the bracket can be produced.



Homework 8

Q45. Describe by means of a sketch, the term Text Wrap.

SKETCH

Q46. Describe each of the following DTP terms, using a sketch if required.

(a) Footer

(b) Column rule

(c) Gutter

(d) Box

Q47. A DTP document is planned in stages. State the stage which follows **Research**.

Stage _____

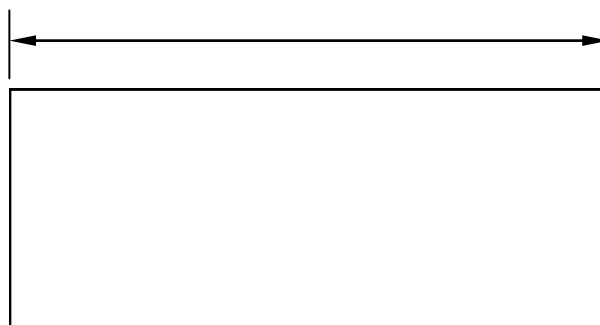
Q48. Describe what is meant by **dimensional tolerancing**.

Q49. State two reasons why tolerances are an important feature in manufacturing.

(a) Reason 1 _____

(b) Reason 2 _____

Q50. Show a horizontal linear dimension of 30mm with a tolerance of +0.15 and -0.25 applied directly to the given graphic, using a recommended method.



Q51. "Balance" is a Design Principle. Two types of "Balance" are;

- Symmetrical
- Asymmetrical

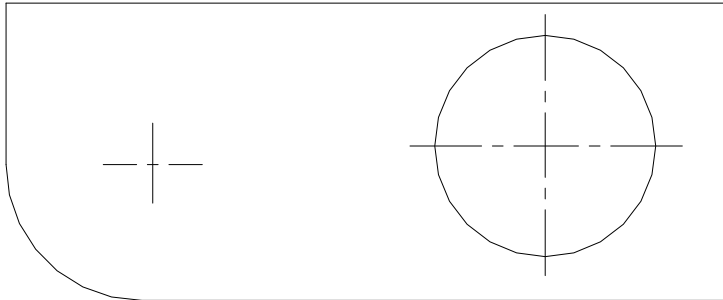
For each type of "Balance", sketch or describe the typical layout of a DTP page.

(i) Symmetrical

(ii) Asymmetrical

Q52. The component below is drawn to a scale of 1:10.
Dimension the drawing using British Standards, to include.

- (a) The overall length
- (b) The overall height
- (c) The Radius



Q53. 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 _____

Example of graphic _____

(b) *Production*

Purpose _____

Example of graphic _____

(c) *Promotional*

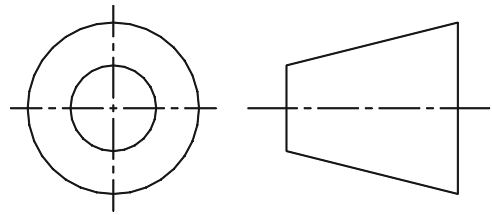
Purpose _____

Example of graphic _____

Homework 9

Q54. State the name of the British Standard symbol shown below

(a)



Name _____

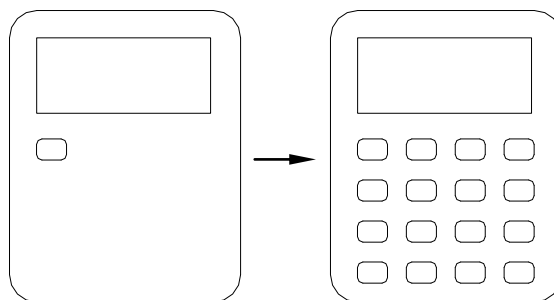
(b) State the name of the drawing where such a symbol would be found.

Name _____

(c) State the two types of page orientation.

Orientation 1 _____ Orientation 2 _____

Q55. A single button is positioned on the elevation of a calculator. State the single CAD command apart from "Multiple Copy" that will create the eight buttons.

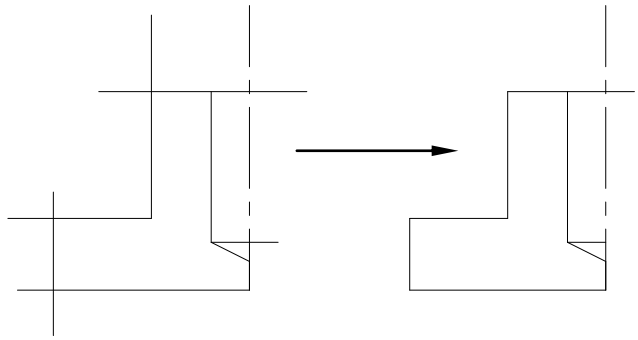


Command _____

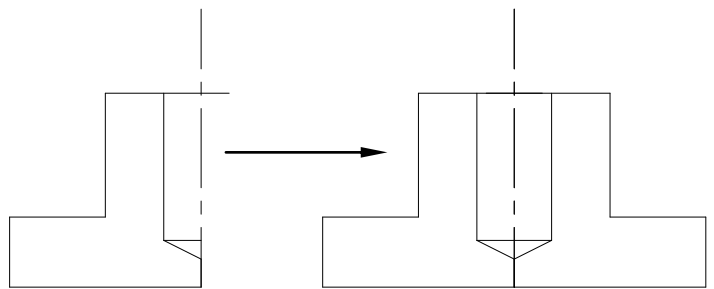
Q56. State the CAD feature that would allow the button to be used in any future design.

Feature _____

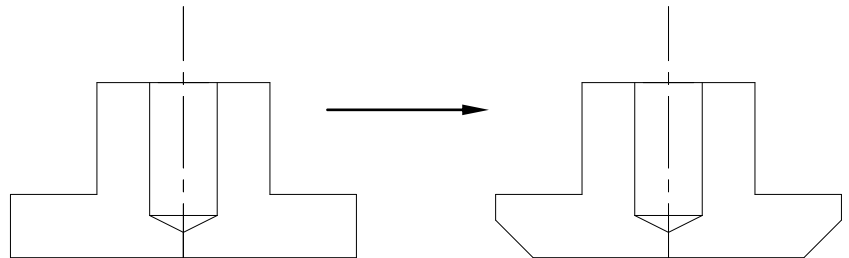
Q57. Shown below and over the page are stages in drawing an object. State the CAD command that is indicated at each stage.



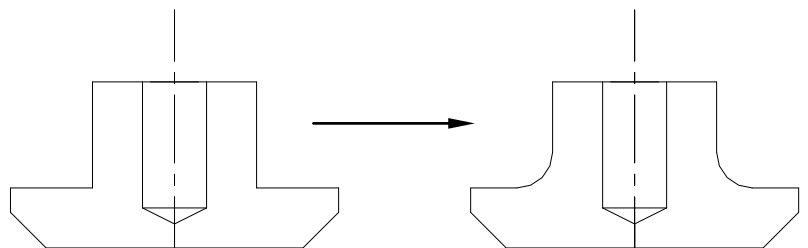
Command _____



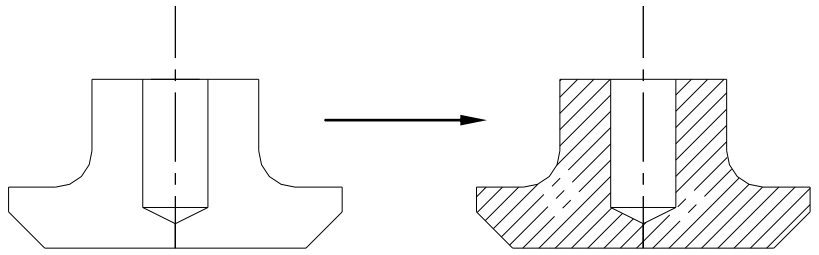
Command _____



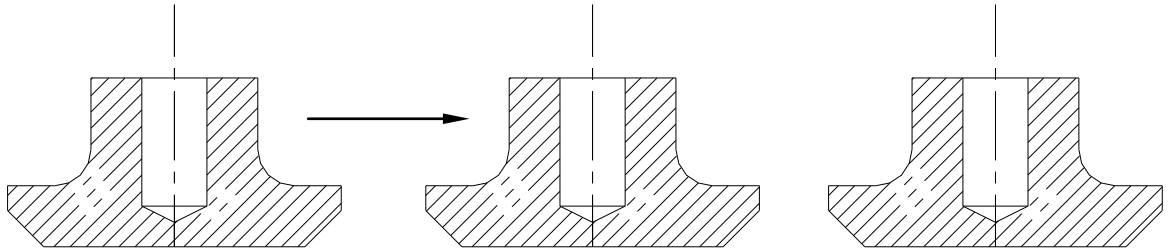
Command _____



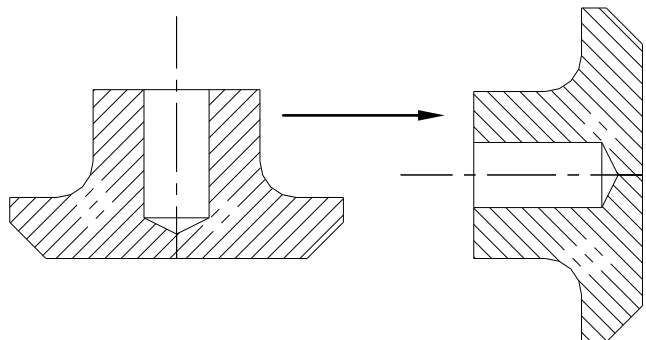
Command _____



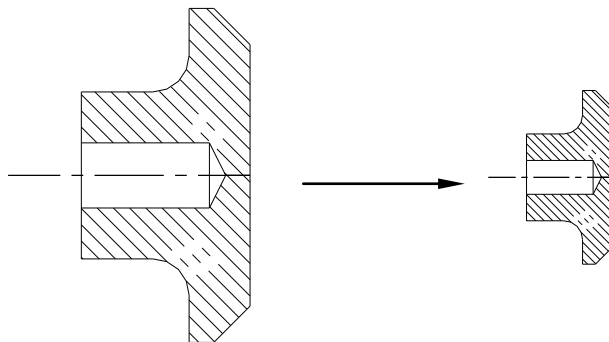
Command _____



Command _____



Command _____



Command _____

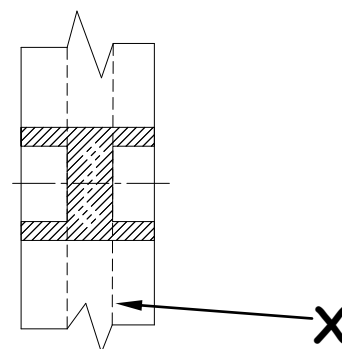
- Q58. Two architects exchange CAD drawings electronically by attaching them to an e-mail.
(a) State the piece of **Hardware** required for each computer to allow the exchange of drawings.

Hardware _____

- (b) State the requirement that each architect must have to allow them to open and edit each others drawings.

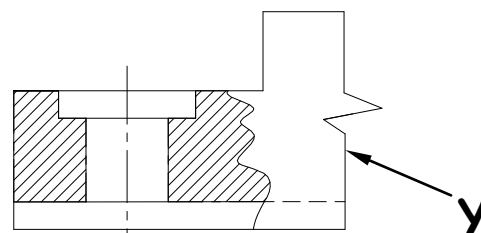
Requirement _____

- Q59. State the type of view shown in **Drawing 1**.



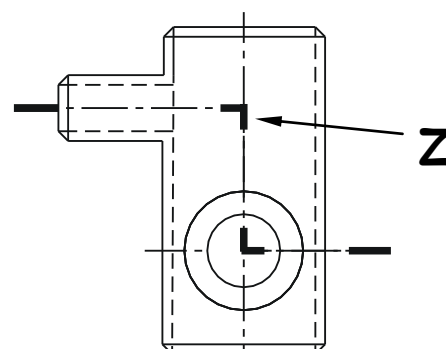
Drawing 1

- Q60. State the type of view shown in **Drawing 2**.



Drawing 2

- Q61. State the type of view produced by the cutting plane in **Drawing 3**.



Drawing 3

Q62. The British Standard **description** of three line types are given.

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

Line type **X** Description: Dashed thin

Application _____

Line type **Y** Description: Continuous thin with zig zags

Application _____

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

Application _____

Q63. **Colour Gradient, Tonal Scale & Highlights** are three effects that could be used when rendering an illustrations.

Describe the effect produced by each term.

Gradient _____

Tonal Scale _____

Highlights _____

Homework 10

Q64. Symmetrical and Asymmetrical page layouts are found in DTP documents.

In the space below, use a sketch to illustrate the difference in these layouts.

In the space below, sketch and label a page with the following DTP terms.

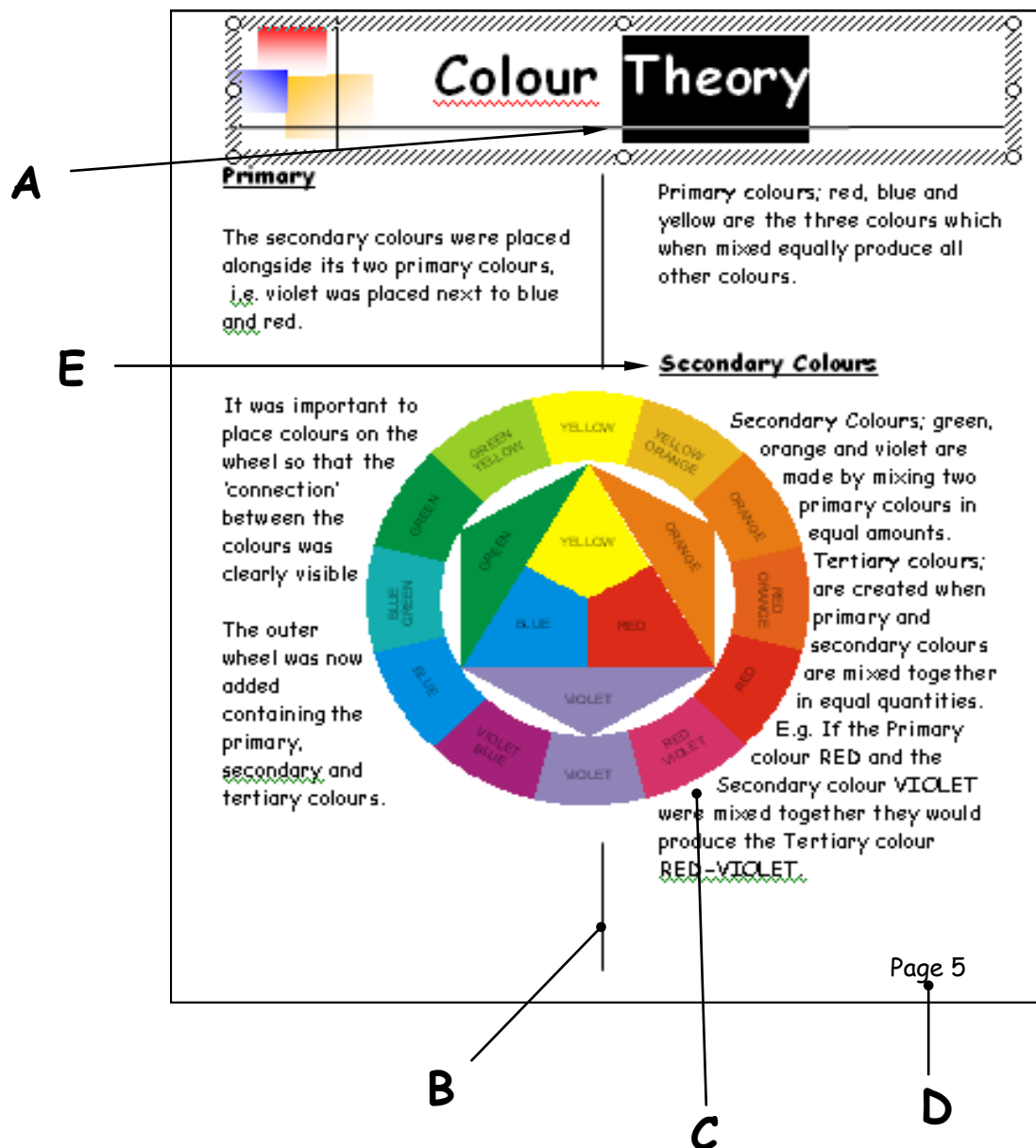
Text runaround (wrap)

Bleed

Rule

Caption

Indent



Q65. An example of a desk top published sheet is shown above

(a) Name the DTP effect indicated by A.

A _____

(b) State each of the DTP terms for each of the features B - E.

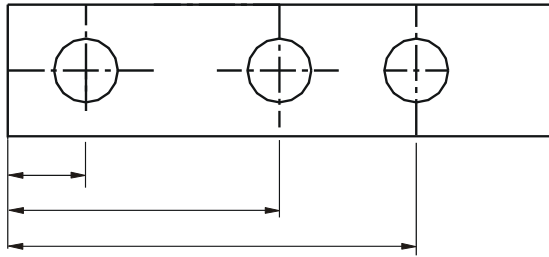
B _____

C _____

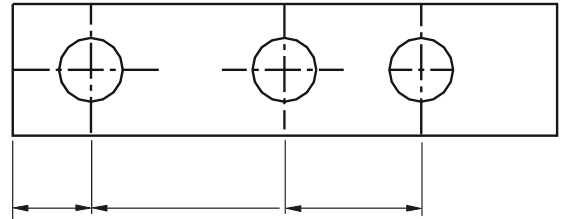
D _____

E _____

Q66. Two methods of dimensioning the same object are shown below. State the **British Standard** term for each method.



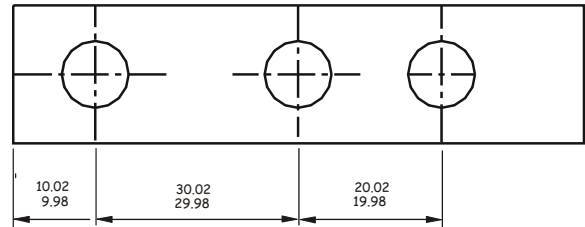
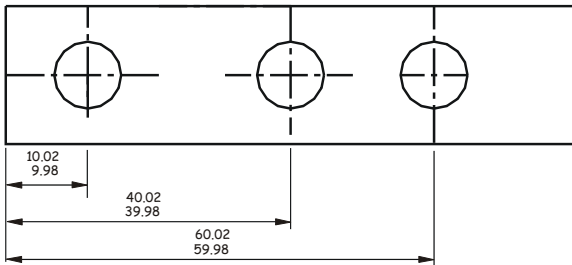
Method 1 _____



Method 2 _____

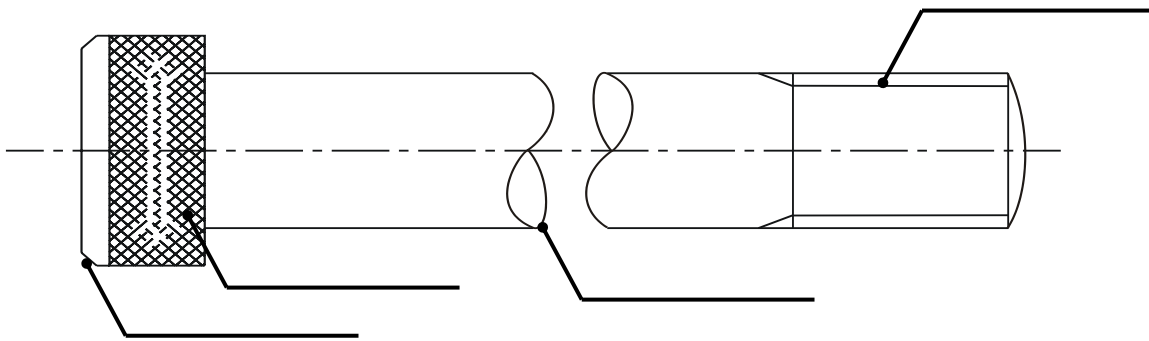
Q67. In order to manufacture this object accurately, functional dimensions have been added.

Explain why Method 1 would be preferable.



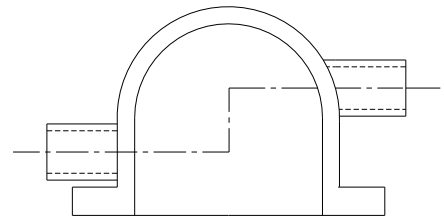
Q68. State one reason for the use of British Standards conventions on drawings.

Q69. State the **British** Standard convention and features indicated on the following graphic.

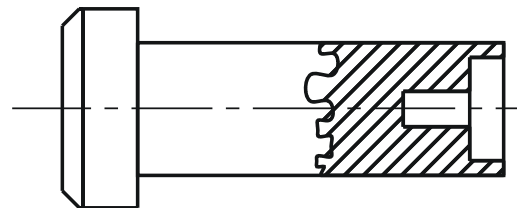


Q70. Hatching is used to show the part of an object that has been sliced by an imaginary cutting plane.

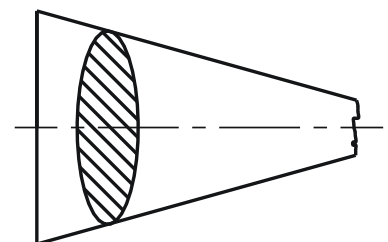
(a) State the type of sectional view produced by the cutting plane in **Drawing 1**.



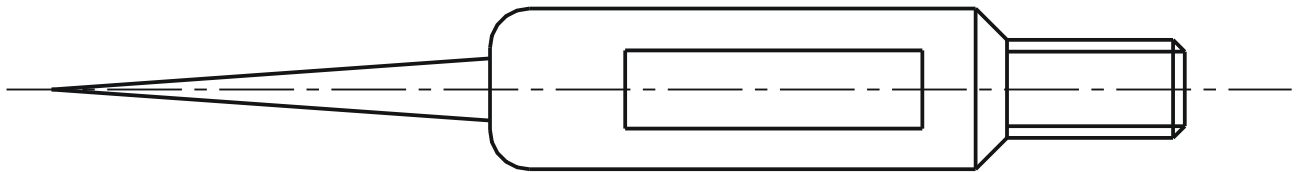
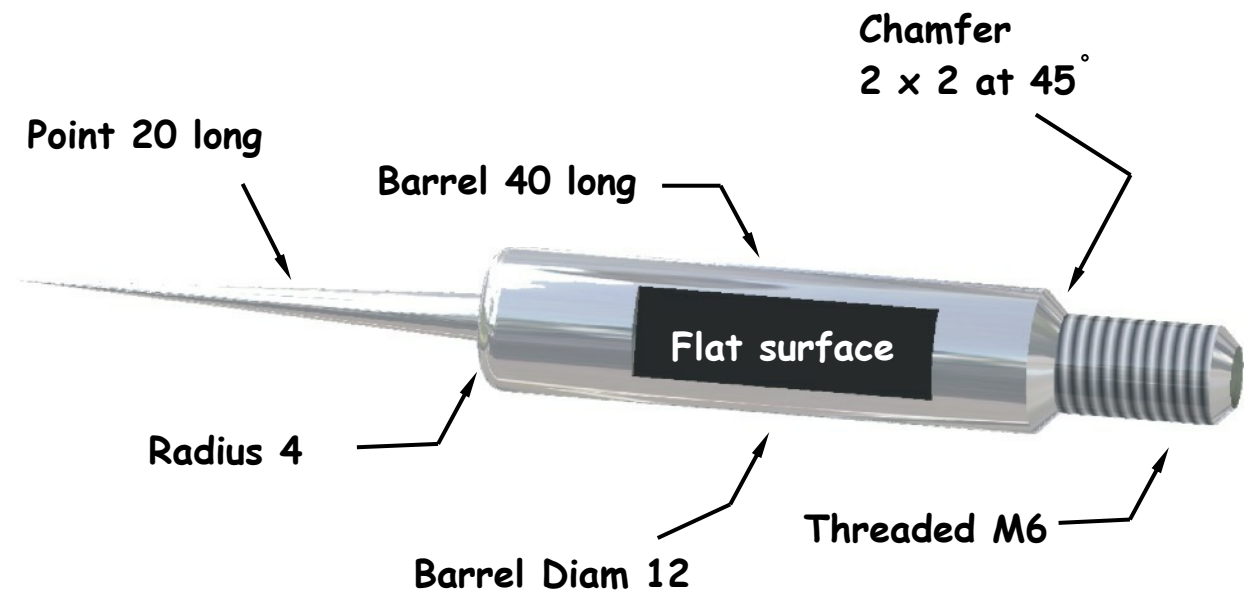
(b) State the type of sectional view shown in **Drawing 2**



(c) State the type of sectional view shown in **Drawing 3**.



Q71. A pictorial view of part of a dart is shown below. Six sizes are given.

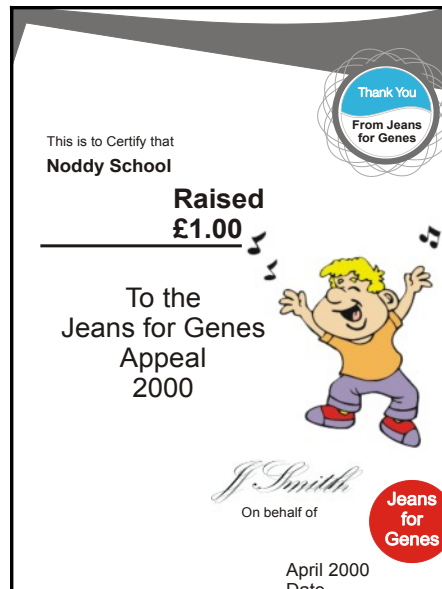


- (a) Using the above drawing, sketch, to British Standards conventions, the six given sizes on the orthographic view below.
- (b) Sketch on the orthographic view above the British Standard convention to indicate the flat surface on the barrel.

Homework 11

Q72. In Illustration and presentation, the arrangement of elements within a layout, how they relate to each other and what mood or feeling the layout conveys is termed **balance**.

(a) State the **two** types of balance shown.



(a) _____ (b) _____

(c) State which page orientation has been used.

Q73. Describe each of the following lettering terms.

Font _____

Italic type _____

Serif _____

Q74. The word **highlight** is used in both word processing and illustration and presentation.

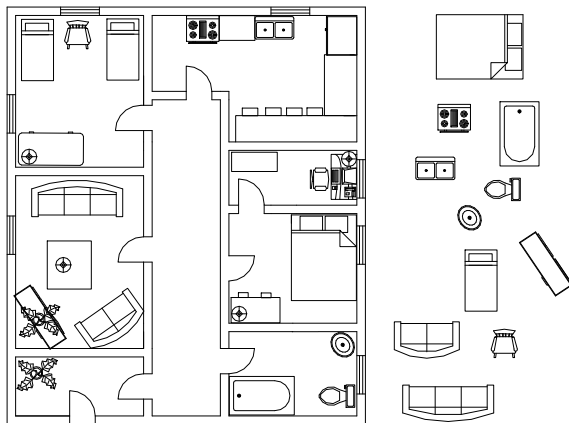
Explain the difference by describing what it means in each case.

Highlight in Word processing _____

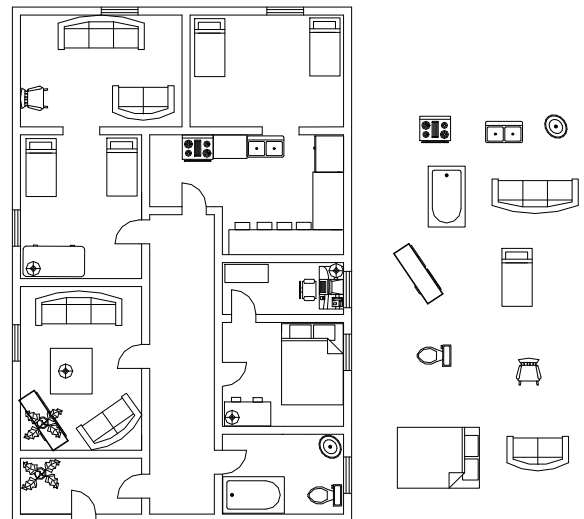
Highlight in Illustration & Presentation _____

Q75. The question and solution for an examination were drawn using a CAD package.

Question



Solution



Drawn by Tracy Whitfield 2007

State the CAD feature which enables the solution to be revealed or concealed.

(feature) _____

Q76. State the CAD feature which enables the solution to be revealed or concealed.

Feature _____

Q77. State **two** other types of drawing used in construction.

Drawing 1 _____

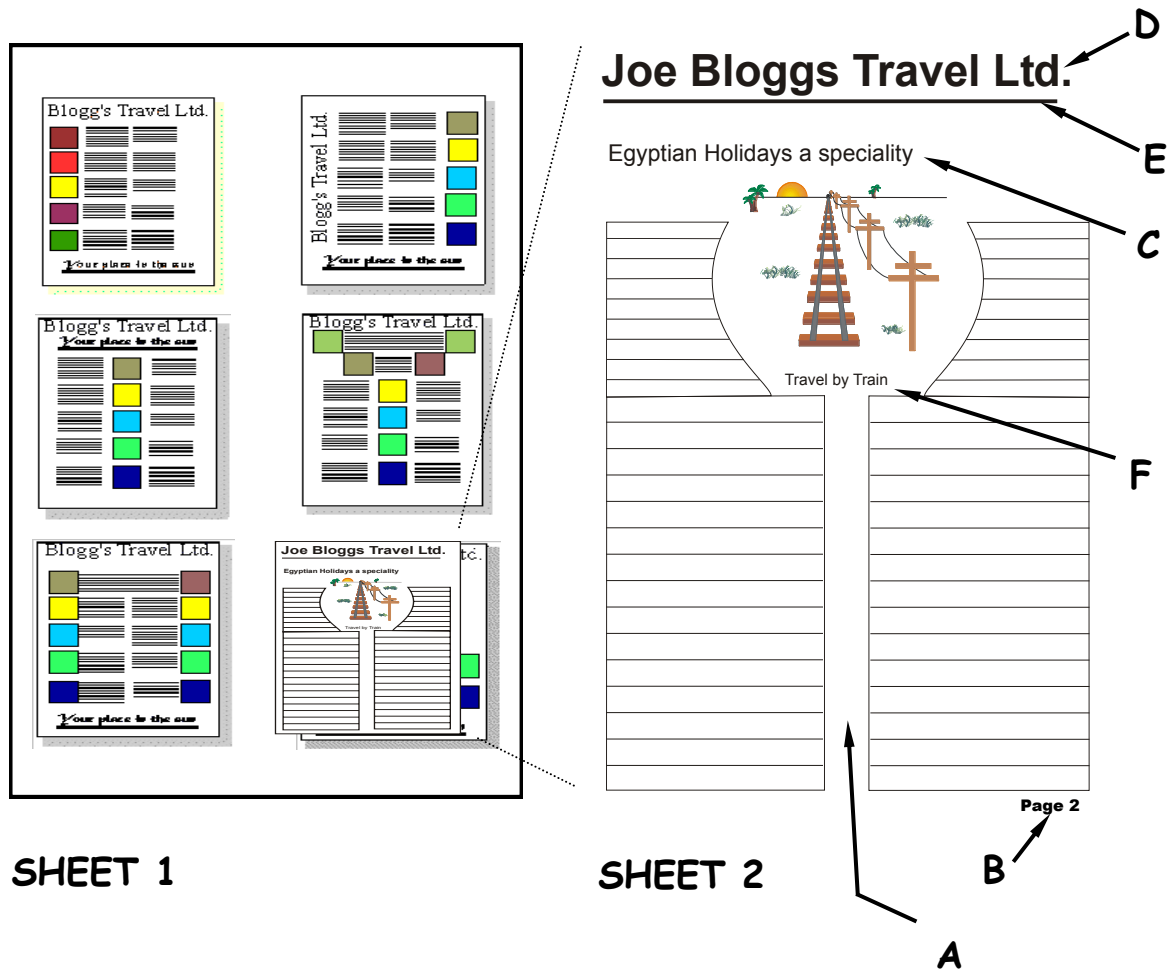
Drawing 2 _____

Q78. State two advantages gained by using the feature stated in the previous question.

Advantage _____

Q79. State three CAD portable storage devices other than hard drives or floppy drives.

Q80. When producing a **DTP** document it is important to develop ideas prior to producing the final article. There are three stages in this process, the first and second are shown below, and are usually produced by freehand, the third is the **Presentation** visuals.



State the stage indicated by each sheet.

Sheet 1 - Stage _____

Sheet 2 - Stage _____

Q81. State the DTP term for each of the lettered elements on Sheet 2

A _____

B _____

C _____

D _____

E _____

F _____

Homework 12

Q82. The following features could be used when producing a computer rendered graphic using CAG software.

Explain each of the following features.

Colour fill _____

Colour gradient _____

Auto tracing _____

	Week No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Section 1	Freehand Orthographic sketches																		
	Freehand pictorial sketches																		
	Annotated thumbnail sketches for DTP																		
Section 2	CAD orthographic drawings to BS Stand.																		
	CAD exploded isometric drawing																		
	CAD auxiliary view to clarify detail																		
Section 3	Sales Poster																		
	DTP 3 fold leaflet																		

Q83. An incomplete chart used by a graphics company is shown below.

(a) From the information given indicate on the chart, by shading the relevant areas the time the following processes occur.

Q 84 (continued)

- (ii) **CAD exploded isometric** drawing requires 2 weeks and is completed 1 week after the "CAD orthographic drawing" is completed.
- (ii) **DTP 3 fold leaflet** requires 5 weeks and commences midway through the "sales poster".

Q85. Section 1, Section 2 & Section 3 in the chart are stages normally referred to as "**the three P's**".

Section 1 _____

Section 2 _____

Section 3 _____

Q86. State the type of chart and describe its main function.

Chart Type _____

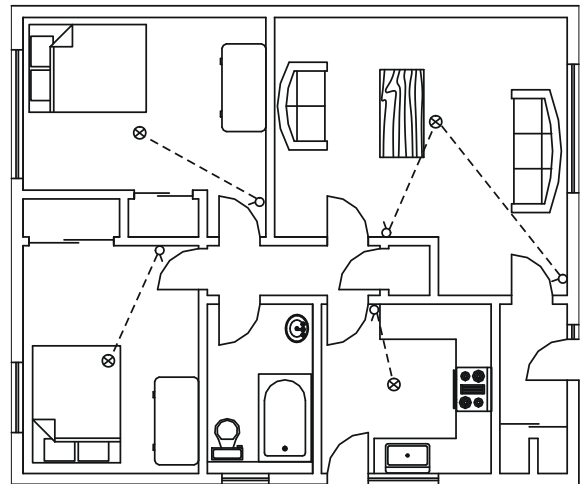
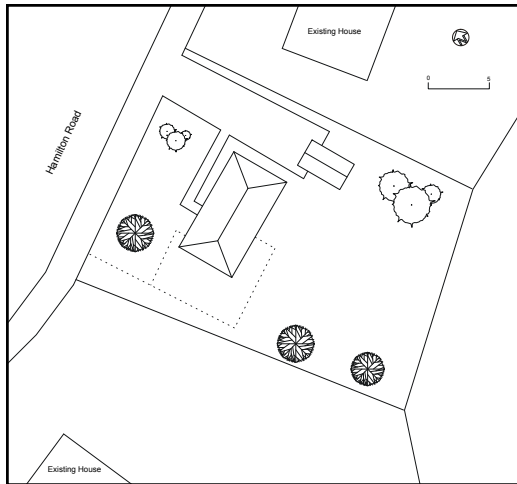
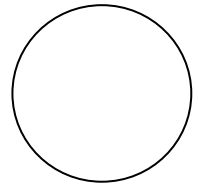
Function _____

Q87. Two plans from the **same construction project** are shown below. They are **not to scale**.

State, under each plan, the appropriate

- (i) plan type
- (ii) scale

Draw a **BS North Point** here



(i) Plan A _____

(i) Plan B _____

(ii) Scale _____

(ii) Scale _____

Q88. The graphics for a construction project fall into 3 main types: *Preliminary, Production and Promotional*.

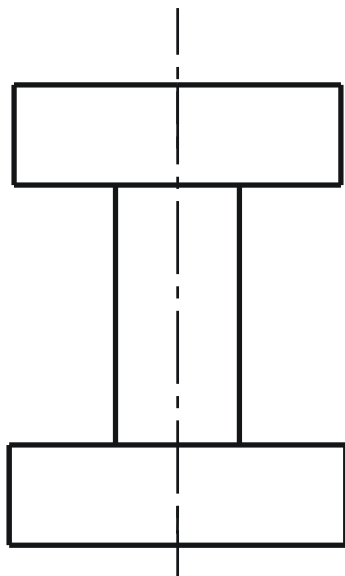
- (i) State, from the list above , the **type** of graphic shown.

- (ii) Describe the **purpose** of this type of graphic.

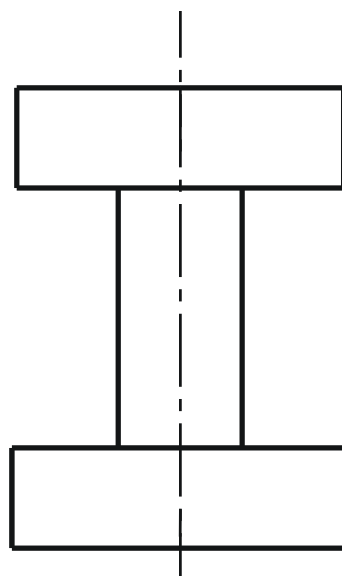


Q89. Two elevations and a pictorial view of a solid hand weight are given.

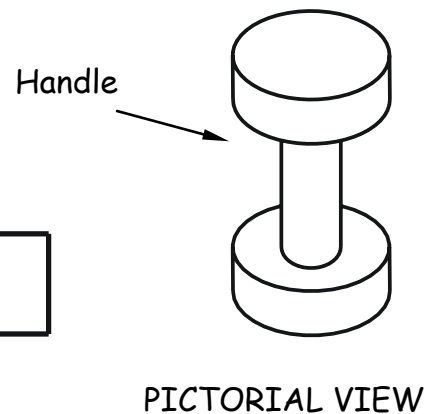
- (i) On the elevation X, sketch a revolved section of the handle.
- (ii) On the elevation Y, sketch a removed section of the handle.



ELEVATION X



ELEVATION Y



PICTORIAL VIEW

Q90. In Engineering drawing practice, state two parts which are not normally sectioned when a cutting plane passes longitudinally through them.

Part 1 _____

Part 2 _____

Q91. State the DTP term for each of the descriptions (i-vi).

(i) White text on a black background _____

(ii) A horizontal line placed below a headline _____

(iii) Text describing a graphic, usually placed below it. _____

(iv) The space separating adjacent columns of text _____

(v) A page layout arranged with its widest side horizontal. _____

(vi) Text at the bottom of a page repeated throughout the document. _____

Q92. Describe **one** purpose of thumbnail sketch layouts

Q93. In **text alignment**, describe an advantage and disadvantage of *Full justification*.

Advantage _____

Disadvantage _____

Q94. State **two** other types of text alignment.

(i) _____ (ii) _____

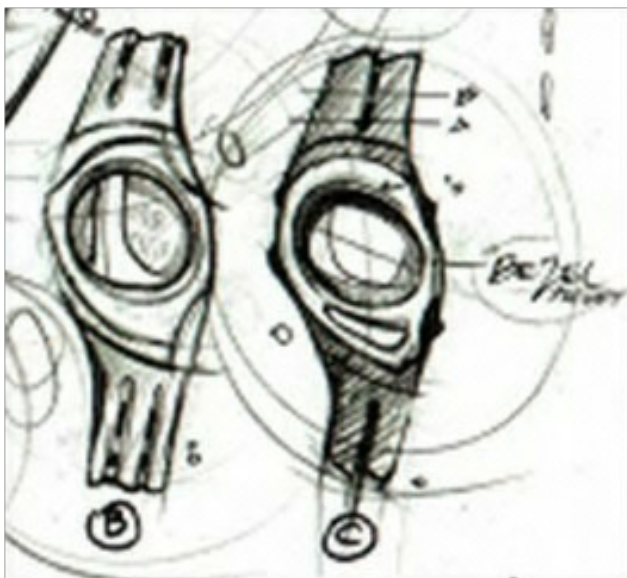
Homework 13

Drawings and Sketches including **Preliminary**, **Production** and **Promotional** Graphics are generally categorised as the 3P's.

Q95 Look at the graphics shown below and decide

1. What **category** of graphic **preliminary**, **production** or **promotional** graphics they fit into
2. What specific **type** of **sketch** or **drawing** they are
3. Whether they are **freehand sketches**, **sketches**, or **drawings** (your answer should include the word 'line' or 'rendered')

The first one has been done for you



1. Preliminary

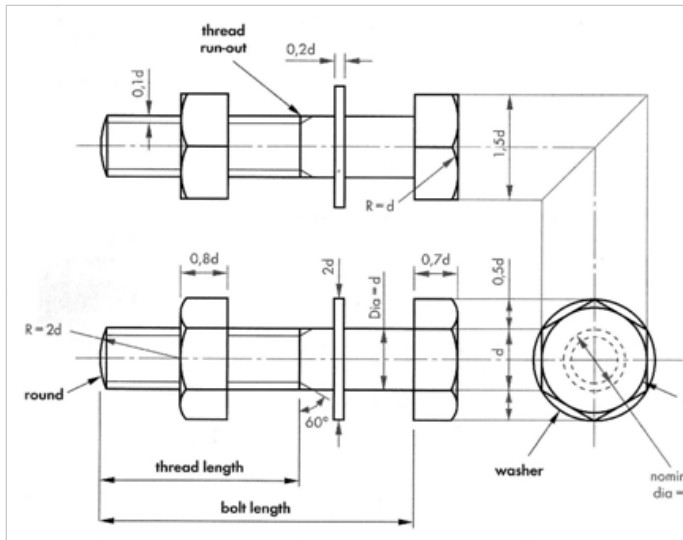
1. _____

2. Orthographic sketch (elevation)

2. _____

3. Freehand (line with some rendering)

3. _____



1. _____

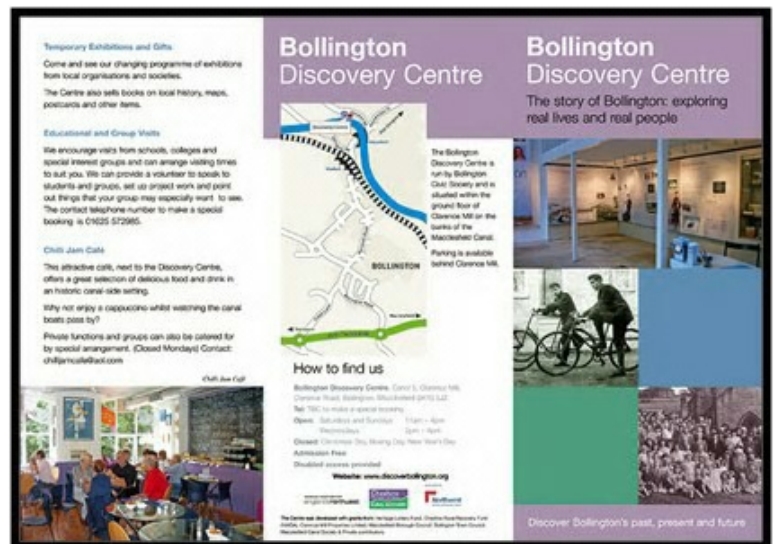
1. _____

2. _____

2. _____

3. _____

3. _____



1. _____

1. _____

2. _____

2. _____

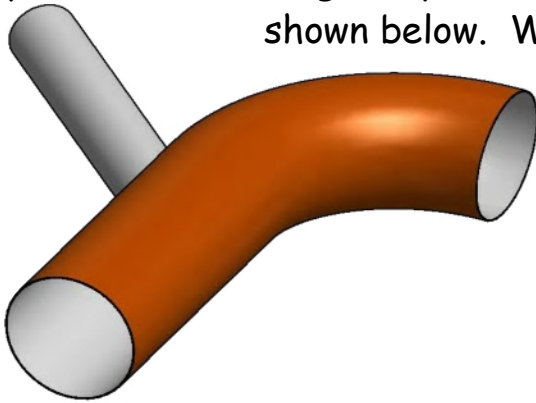
3. _____

3. _____

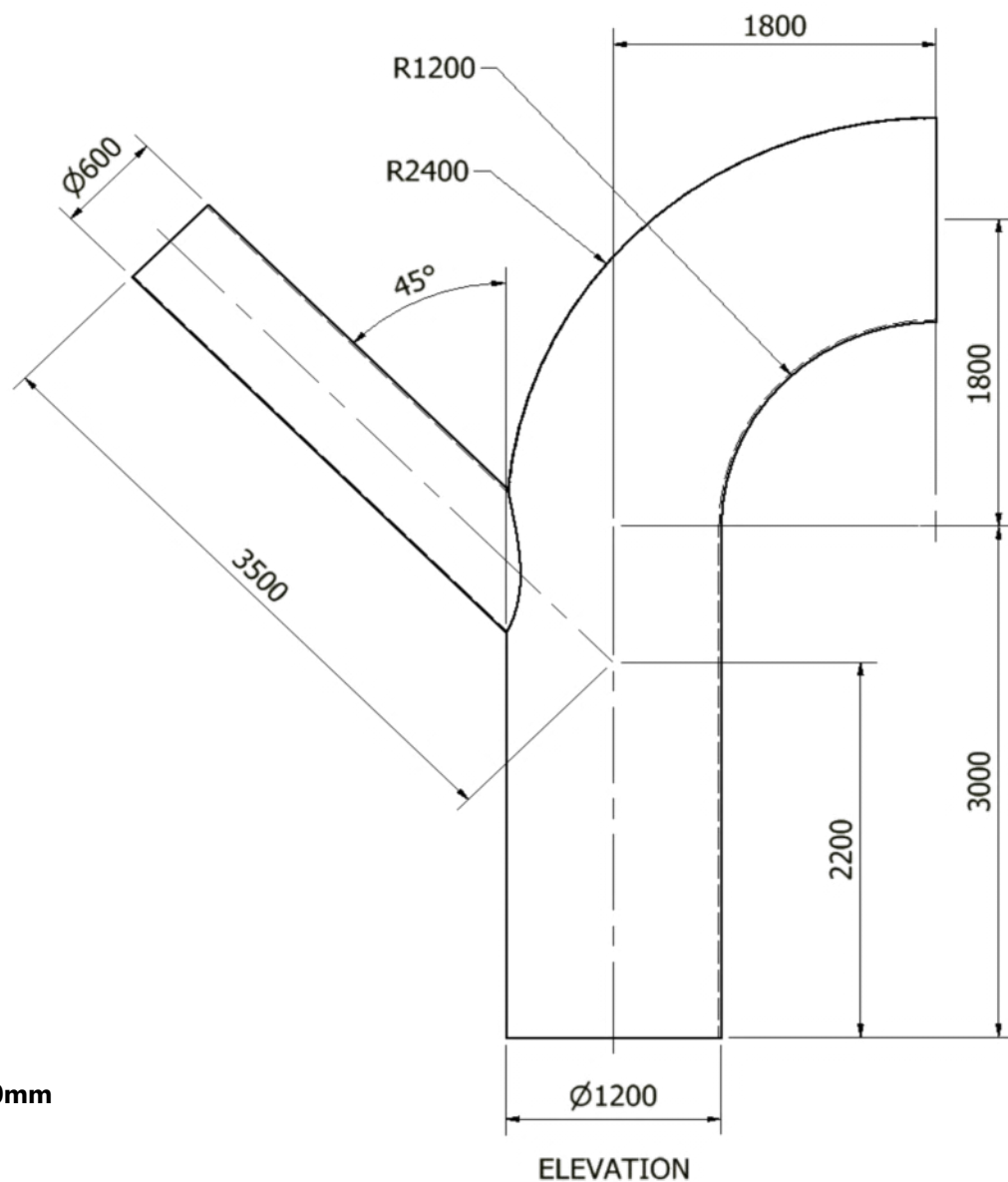
Homework 14

Modelling Plans Water flume

A production drawing and pictorial render showing a section of a water flume is shown below. With reference to correct dimensions complete question 96 - 98.

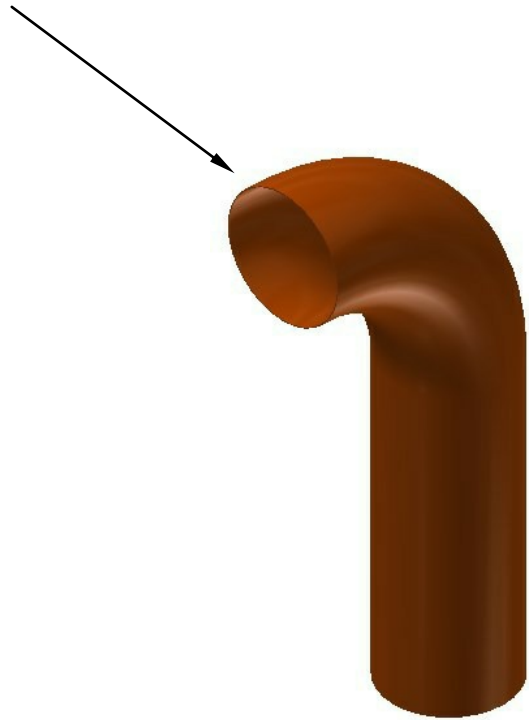


PICTORIAL VIEW OF TUBE



Wall thickness 10mm

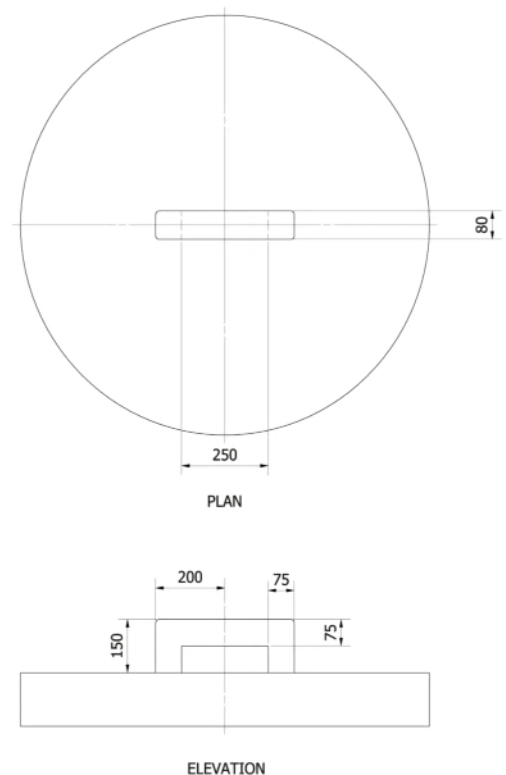
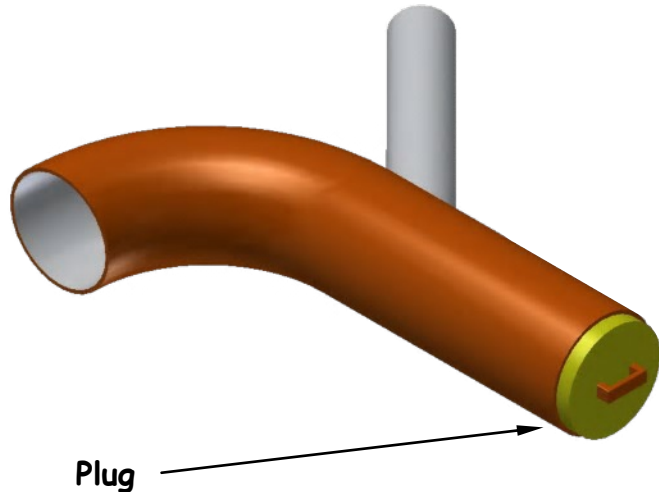
Q96. In the space provided below, describe and sketch the modelling plan that would have been created prior to the production of this part. Only explain the process up until the point shown.



Q97 A plug has been designed to be used when the flume is not in use. State an appropriate diameter for this part (refer to the production drawing on page 54).

Q98. Production drawings for the flume plug are shown below. With reference to appropriate dimensions, describe and sketch a modelling plan for producing the handle of the plug. This was completed using only extrusions and fillets. You do not need to describe the process for completing the fillets, only extrusions.

Space for Answer



Production drawing for the plug