

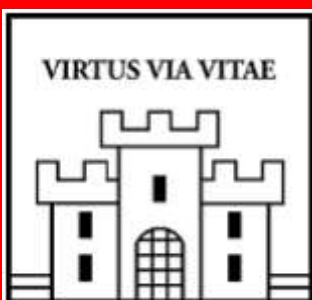
# Forfar Academy

Technical Department

Higher Graphic  
Communication

Homework

Knowledge and  
Interpretation



Name \_\_\_\_\_

# Homework 1

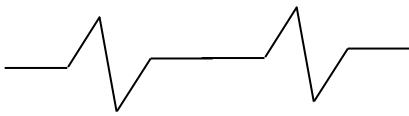
Q1. For each of the following lines name each and explain where it would be used on a drawing.



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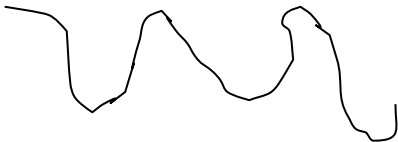
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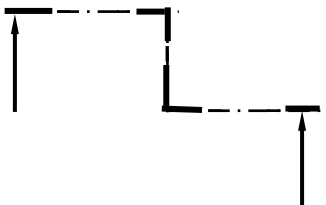
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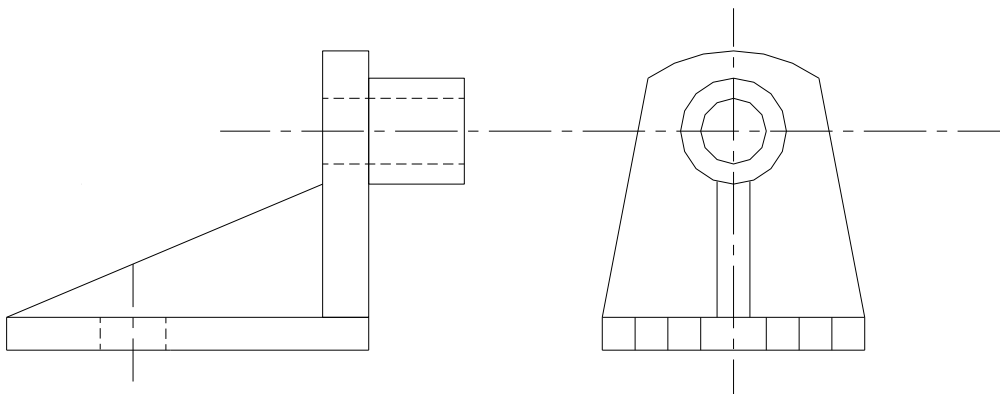
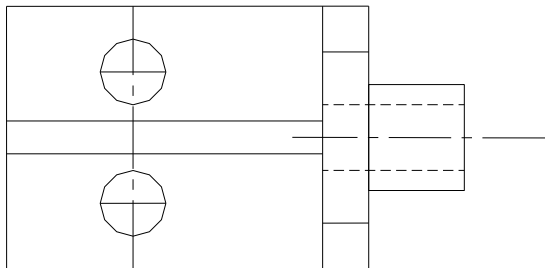


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- Q2. Explain the purpose of applying tolerances to working or engineering drawings
- Q4. Tolerances can be applied to a drawing using two methods, what are these methods ?
- Q5. Using your knowledge of tolerances, apply the following tolerances to 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.



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

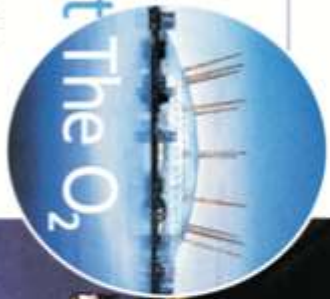
**Elements 3** -----  
Description

**Elements 4** -----  
Description

what's on...

Your monthly guide to the UK's premier entertainment venue

# Events at The O2



**PARTY LIKE A WILD IN THE O2'S BLUEROOM!**  
 A night 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. Use the Blueroom bar.

The atmosphere in the bar is only getting going now, and it's exclusively for the use of a limited number of O2 customers per night. If you don't have O2 access, you can't get in. So, you will be one of the lucky 200.

**EVERYONE WHO BUYS A BLUEROOM TICKET CAN BRING THREE FRIENDS WITH THEM. ABSOLUTELY FREE OF CHARGE!**

Blueroom staff can bring your drinks with them! The bar is closed with every video, whilst the lighting, a backdrop with thousands of lights, and screens showing an ever-changing array of animations. Get a picture you want to print? For it £10.00 and we'll print it for you. Plus, every night a different set of Blueroom as it gets changed to suit what's happening at the moment! Don't miss out on this bar theme for adults.

The Blueroom bar is just one of the exciting things for O2 customers when you visit The O2. Make sure that you visit [BLUEROOM.O2.CO.UK](http://BLUEROOM.O2.CO.UK) and don't miss out!



**BOOK NOW!**  
 The O2  
 Peninsula Square,  
 London, SE10 0DX  
 T: 0203 856 0202  
[www.theo2.co.uk](http://www.theo2.co.uk)  
 #o2blueroom

**PRIORITY TICKETS**  
 For a full list of what's on at The O2, visit [O2.INFO.UK](http://O2.INFO.UK). As an O2 customer you can get priority tickets to The O2 - visit [O2.CO.UK/O2INFO](http://O2.CO.UK/O2INFO) to register

## BLUEROOM: BAR THEMES

**O2 Club Pop**  
 Over the top lookbook, dressy tunes and dance arcade games!  
**O2 Club Disco**  
 Showcase the Blueroom with your entrance and try our Disco Cocktail.  
**O2 Rock 'n' Roll**  
 From rock classics to modern anthems, we're playing them all at the rock bar.  
**O2 Live Zone**  
 Set your pulse racing with a hour of great games, such as football, golf and dig-a-bit.

**O2 Club Pop**  
 Get ready to party in the Blueroom bar with our popstar-themed look!  
**O2 The Legends**  
 Enjoy performance participations of all-time classics from our live jazz trio.  
**O2 For The Family**  
 Award-winning food and popcorn, and the best bar partners in the business with their range.  
**O2 O2's Favorites**  
 Call out in the Blueroom bar to a live acoustic set. Enjoy a glass of wine and a message from an O2 target!

## LAST CHANCE TO BOOK FOR...

**Priority Edition**  
 12 August  
 From our first park to a new and exciting, Robin the dove of all Caribbea spoken word show at night!

**THIS MONTH**  
 18 August  
 The performance of the month!  
 19 August  
 Myer's first archaeological dig. Heavens, you're the first person to discover it! It's better in real life!



## NEXT MONTH

**5th September & 6th September**  
 Here is the time to book for an evening of musical theatre as Great Britain takes on the Caribbea of The O2. An absolute must for fans of the British music scene!

## Shows to watch

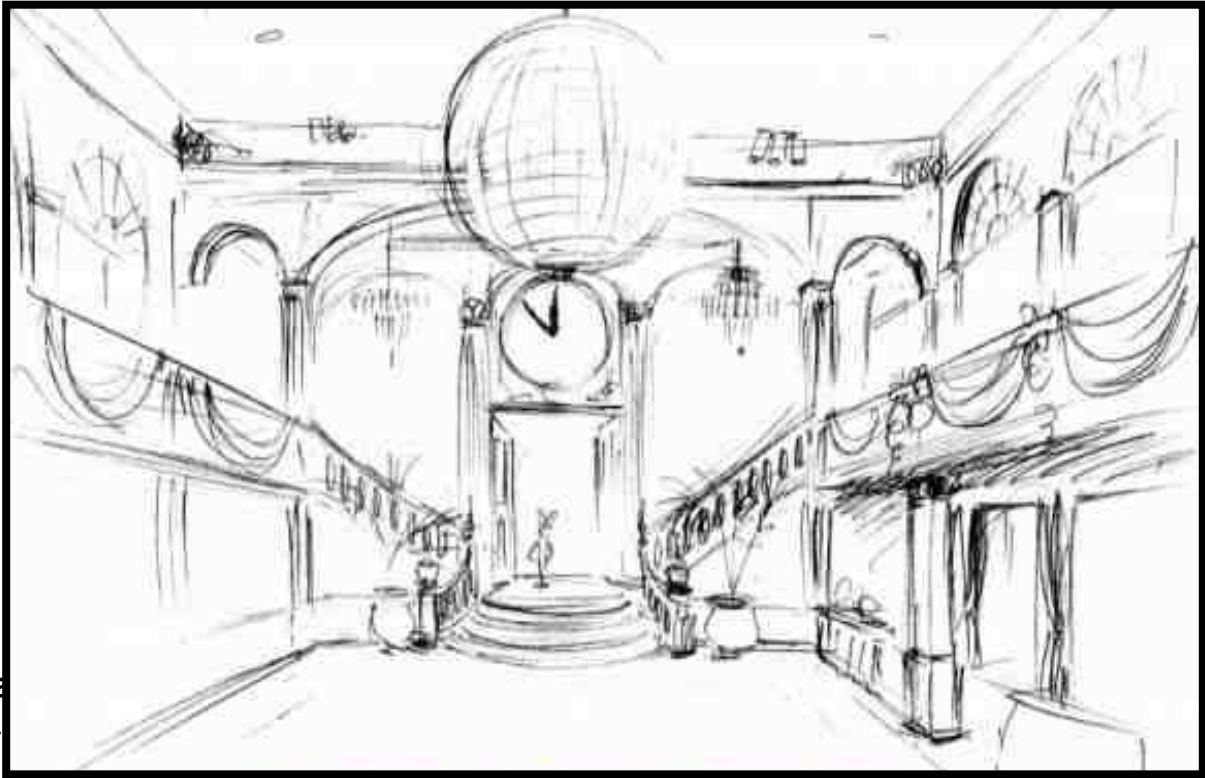
**11, 12 & 13 September, 1 October**  
 The musical ever that is 'Somebody's Having Fun' for the first time in nearly ten years! Don't miss this rare chance to see a genre helped in action, playing at all the greatest bars in the O2.

## COMING SOON

**18 October**  
 The final night of James Blunt's All The Love. Such UK tour is guaranteed to be one to remember!



**BOOK NOW FOR**  
 Canadian rockers **Nickelback**, fighters **Kon Howard Jones**, and the **Impressos**. **Turner**. To book go to [theo2.co.uk/insidebook-now](http://theo2.co.uk/insidebook-now)



The  
Pre

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

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(e) Centre Spread

---

(f) Banner

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

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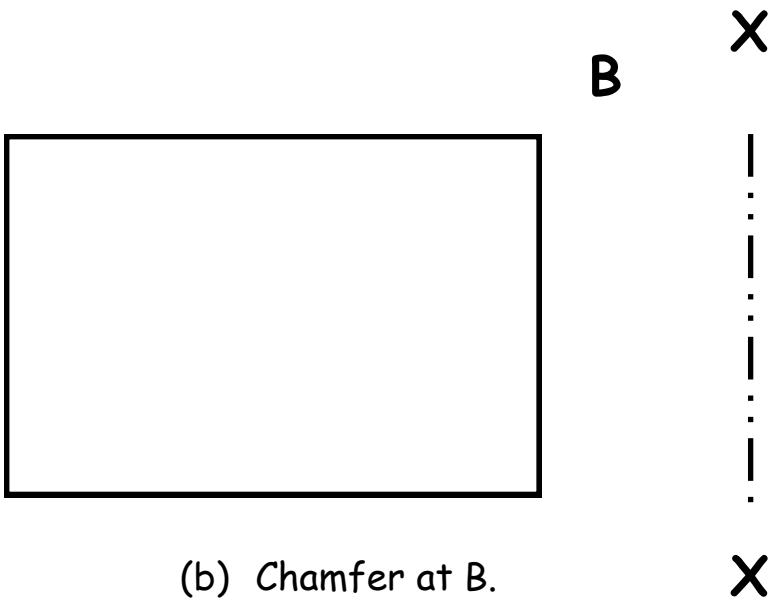
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Q10. An incomplete rectangle has been drawn using a CAD package. Sketch on the drawing the effects of applying the following CAD commands.



(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.

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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

\_\_\_\_\_

## Homework 3

Q19 Please refer to the "Events at the O2" leaflet (*overleaf*)

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 (*overleaf*)

Annotate the leaflet to show

Footer  
Bleed  
Headline  
Gutter  
Reverse Text  
Rule

## 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:

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 counting begins. Gulls, 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 GCS Puffin campaign at [www.seabird.org](http://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 gannets.

**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 walkers, 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 – 5.00pm  
February, March and October  
Monday – Friday 10.00am – 4.00pm  
Saturday – Sunday 10.00am – 5.00pm  
November – January  
Monday – Friday 10.00am – 4.00pm  
Saturday – Sunday 10.00am – 5.00pm  
Last admission to Discovery Centre and Gift Shop 30 minutes before closing.

Save time and buy your tickets online at [www.seabird.org](http://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: 01437 200333 or [www.fivepines.com/seabird](http://www.fivepines.com/seabird)

**BY BUS**  
Regular bus services operate from Edinburgh (service no: 1240X) run by First Bus 200 902228, from Haddington via 121 run by First Bus and from Dundee via 100 run by First Glasgow 27388 902000.

**BY CAR**  
Only 26 miles from the centre of Edinburgh and less than an hour from the English border, the Scottish Seabird Centre is accessible 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.

The Scottish Seabird Centre  
The National Trust reserves, 1022A A16  
Tel: 01437 200333 Fax: 01437 200334  
E-mail: [info@seabird.org](mailto:info@seabird.org)  
[www.seabird.org](http://www.seabird.org)

The Seabird Centre is an independent conservation and education charity dedicated to supporting people in understanding and care for wildlife and the natural environment. Registered charity 50333401.

## Take Home a Toy Puffin!

when you visit our Discovery Centre


Please complete the following to receive your free puffin and/or T-shirt our Gift Shop.  
Just write your home letter  
And tell us where you picked up your puffin!



## Get Closer!

At the award-winning Scottish Seabird Centre

**PICK UP YOUR FREE PUFFIN!**  
See us today for details plus £1 OFF our online booking.



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

**Relax and Unwind**  
Enjoy a leisurely lunch and drink all day in our Licensed Cafe with open decking and panoramic views over the sea and islands. Home-baking and home-made specials. Food and drink served all day.

**Retail Therapy**  
We're guaranteed to find something different in our attractive Gift Shop. Specialty gifts, local arts and crafts, wildlife and green products. Postcards and prints in our Gallery.

**Fantastic Value!**  
Become a member and enjoy free entry all year. Special events and offers, discount on our Whirl and Cans and Boat Trips. Join us today at [www.seabird.org](http://www.seabird.org) or upgrade to membership on the day. We meet and we'll refund your admission. As an attraction 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 GCS Puffin Project to save the puffins. For the experience of a lifetime, you can book our photographic trip, landing on the Bass Rock. Call 01437 200333 or visit [www.seabird.org](http://www.seabird.org) for more information.



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:

SIDE ONE

**Create**  
OCTOBER 09 // ISSUE 08

Explore new ways for students to visualise their ideas with Autodesk Academy.  
Encourage creativity, critical thinking and problem solving with Design Academy.

**Tips and Tricks** Custom USC

1. But, if the same feature is used using a Custom USC, change the name and why... which means the we click on the custom USC box (Fig. 6). Then click on clicking on the screen to using the non-visible input boxes for A, B and C parameters (Fig. 6).

2. The problem comes when you want to change the feature, perhaps name it away or make it to use for some but can be some what cumbersome.

3. To fix I got have a simple shape. To construct a simple we had to add 3 work planes and then draw the sketch on it and extrude our feature to the body of the shape, as in Fig. 7.

4. Now when we create our feature we can use any of the work planes associated with the Custom USC (Fig. 8).

5. It helps very easy to make or create the feature, simply right click on the custom USC and select "RENAME FEATURE". Then you can drag the icon in any direction on the area and it creates by dragging any of the area (Fig. 9-11) when the icon has been repositioned, right click and select "Finish".

The model will re-build itself instantly and update the feature (Fig. 9). Easy !!

**Autodesk in Industry**  
**Best Foot Forward**

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

**Autodesk Academy**

Autodesk Academy is building 2010 as an exciting and exciting software frontier that includes the most powerful learning tool created as a combination between core subject and the very exciting elements to learn the technology while exploring the ways to visualize their ideas.

Autodesk Academy features a variety of modules, including:  
- The learning process, critical thinking, and problem-solving.  
- Supporting performance in real-world, and  
- Providing professional and digital creative services.  
- A 24-hour online resource and support.

**Autodesk Academy Academy**  
Autodesk Academy Academy includes the following:  
Autodesk® 3ds Max® 2010  
Autodesk® Maya® 2010  
Autodesk® MotionBuilder® 2010  
Autodesk® Mudbox™ 2010

Along with these software for personal use via the Student Community.

**Autodesk Design Academy 2010: The Benefits**

Autodesk Design Academy 2010 is a comprehensive, self-paced learning environment that provides students with the skills and knowledge they need to succeed in the design industry. The program is designed to be flexible and adaptable to various learning styles and schedules.

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Autodesk  
Autodesk  
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.

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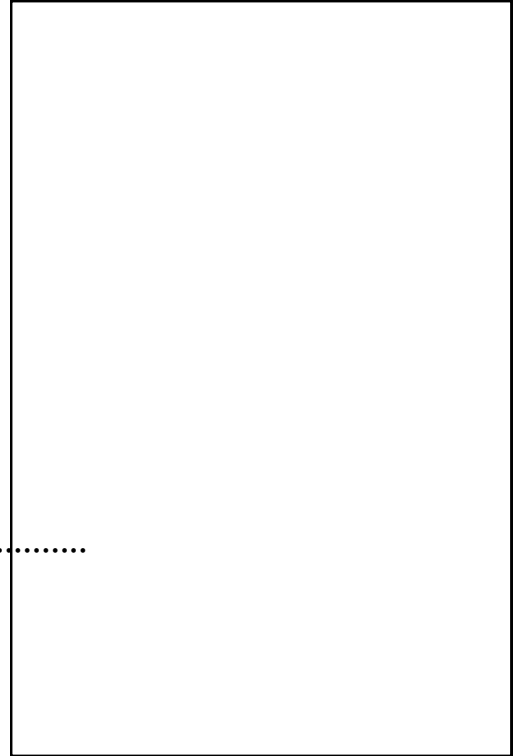
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Autodesk  
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Autodesk

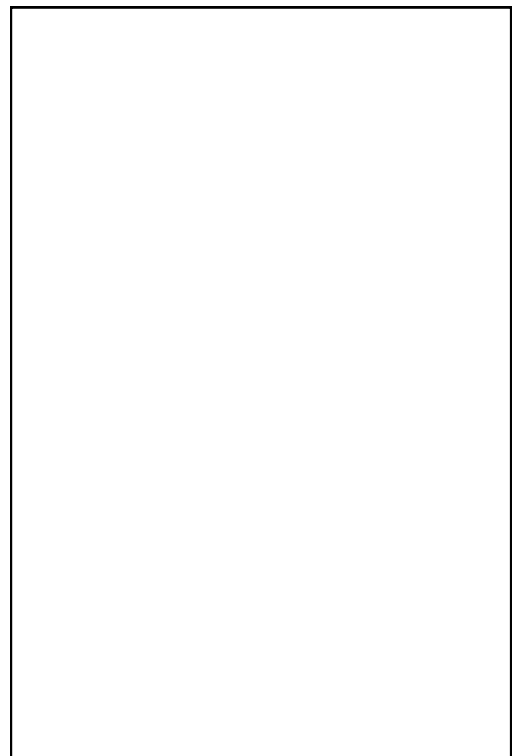
## Homework 5

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)

Edge of paper

**HANDBALL** is an extremely fast, 7 a-side game played indoors by two teams. It has similarities with both basketball and football, is fast moving and requires strength, speed and agility.

A handball team is comprised of seven players, who work together to move the ball up the court and attempt to score a goal.

The fast pace of the game results in many shots being taken, and teams can often score over 20 goals each.

Like basketball, players rely on feints, body swerves, and huge leaps in the air to pass, control the ball and shoot.

Unlike basketball, physical contact is allowed and legal body-checks can sometimes see players crashing to the ground!

BRITISH HANDBALL

**Play Handball**

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

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:



**ORDIEQUISH**

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

**The Soap 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 steep (well) but just a bit more? Keep climbing for an add on – 'The Dragon's Tail'. Allow 45 mins – 5 hrs (3 miles) round trip from the car park. Then do it again!

**The Haggis**

Grade – MODERATE  
You just want more don't you? You want to meet The Haggis. This beauty, 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.

**Dandiella**

Grade – MODERATE  
A strange beast, twice the size of any man, who builds trails through the wood when you're sleeping. Dandiella gave up eating mountain bikes and now survives on porridge. A great flowing route – cruise it or ramp it but you'll certainly enjoy it. As with athen hie, can be linked to athen 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 table-top and blast a bank take. Have 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, Hubba'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.



**KEY TO MAP**

Trail Start	Car Park	IC Woodland
Cycle trail	Car Park (Bicycle)	Non-IC Woodland
Riding direction	Camping Site	Main Road
	Cowslip Site	Secondary Road
	Tubers	Other Road
	Refuge/Shop	Railway
		Road / Track

**Enjoy Scotland's outdoors responsibly**

- Take responsibility for your own actions
- Respect the interests of other people
- Look for the environment

**KNOW THE CODE BEFORE YOU GO**



**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 Loggan car park – West end of the forest or from the Baumley Brae car park if you're cycling from Elgin. See map. This is a busy wood used by walkers so please keep everyone happy and follow the code.



**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 Alamy and Abernethy/JD contact details)



**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. Sign 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 trumper! 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 Sign 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.

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

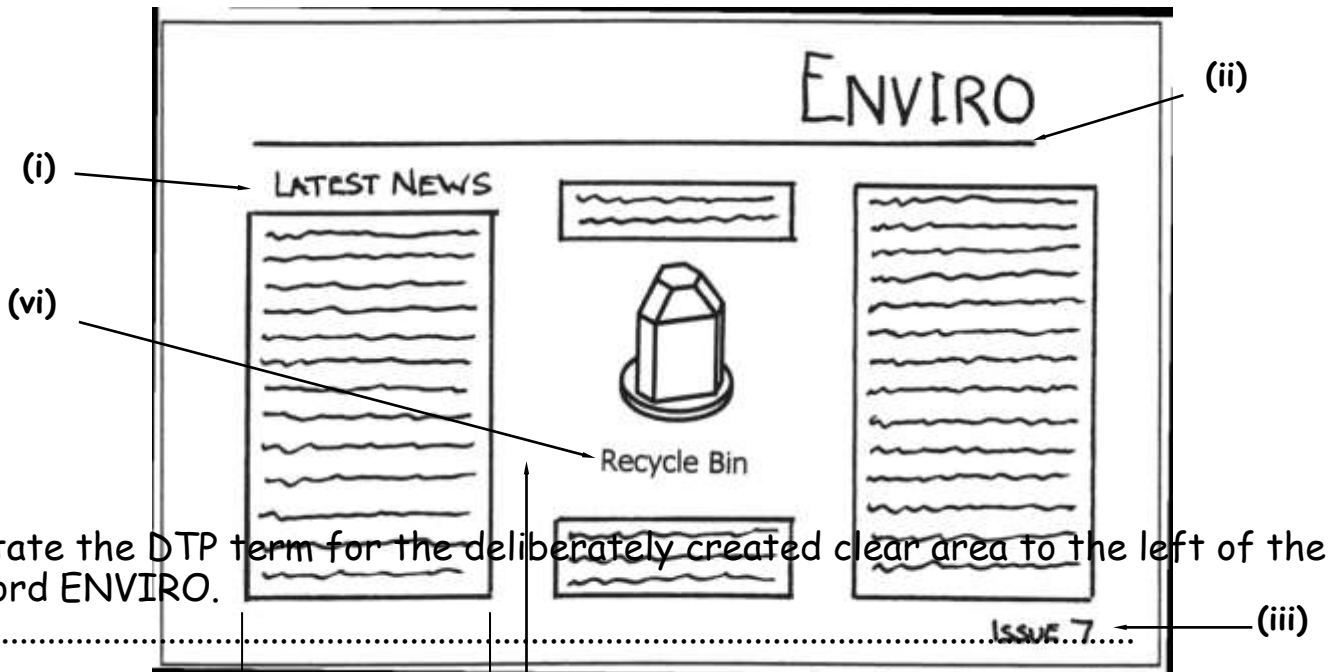
Stage .....

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 (v) for each of the features (i) to (vi).

(i) .....

(ii) .....

(iii) .....

(iv) .....

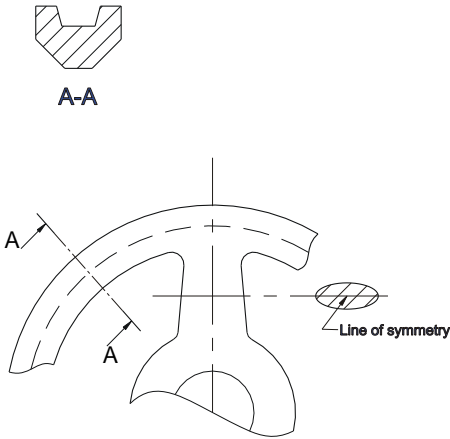
(v) .....

(vi) .....

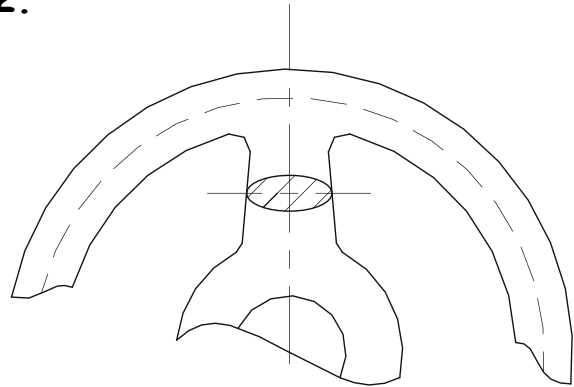
# Homework 6

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

1.



2.



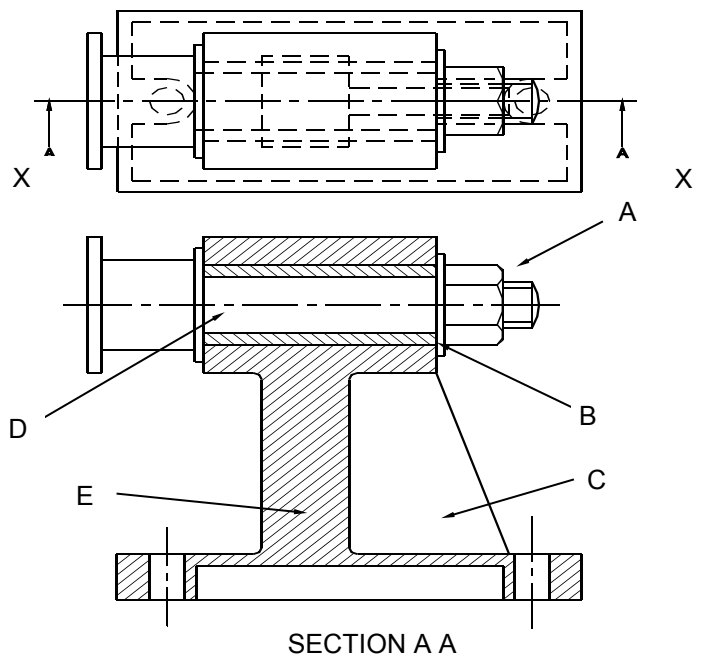
3.

Q29.



- (A) \_\_\_\_\_
- (B) \_\_\_\_\_
- (C) \_\_\_\_\_
- (D) \_\_\_\_\_
- (E) \_\_\_\_\_

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_ shown opposite.



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.

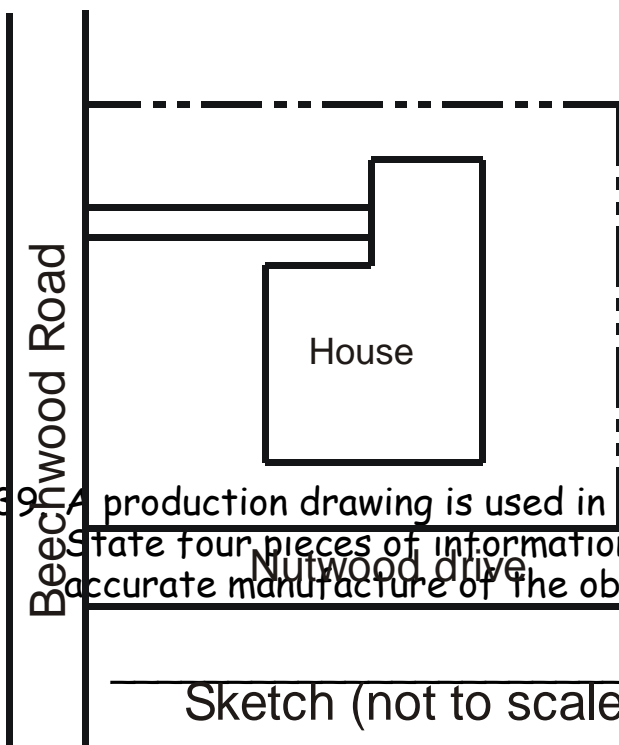
**Visuals (Working Rough)**



## 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.

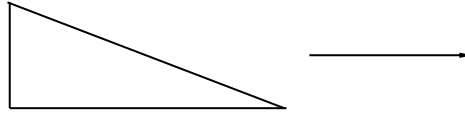


Q39. A production drawing is used in the manufacture of an object.  
State four pieces of information required on the drawing for the accurate manufacture of the object.

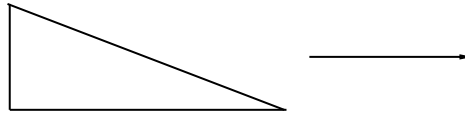
Sketch (not to scale)

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

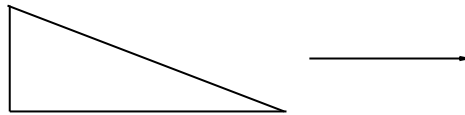
(a) Rotate (90 )



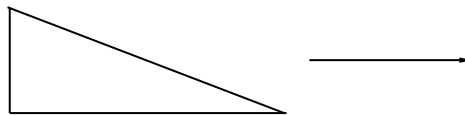
(a) Scale (down)



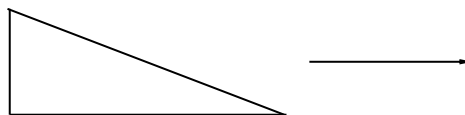
(a) Hatch



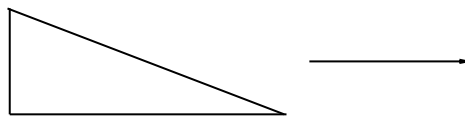
(a) Copy



(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.~~

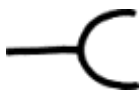
~~Scale 1 \_\_\_\_\_ Scale 2 \_\_\_\_\_~~

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

~~Reason 1 \_\_\_\_\_~~

~~Reason 2 \_\_\_\_\_~~

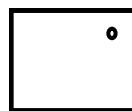
Q43. Name each of the British Standards symbols shown below..



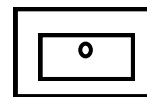
\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

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.

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**.

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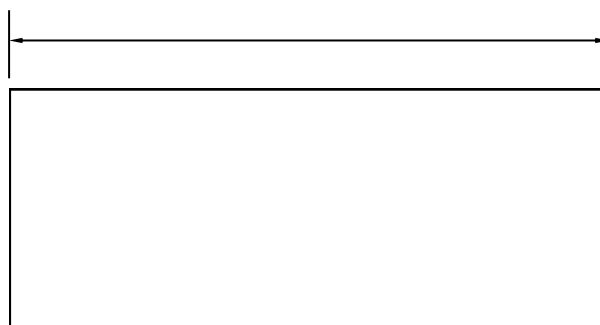
---

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

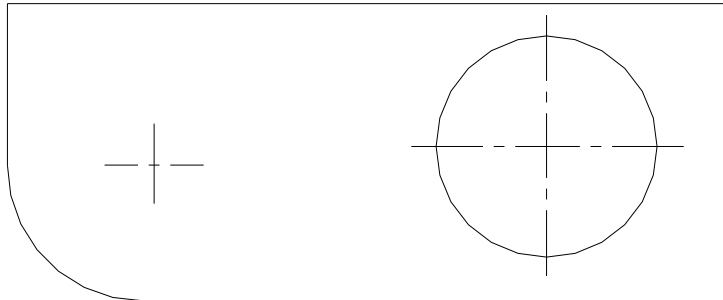
For each type of "Balance", sketch or describe the typical layout of a DTP page.

(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. Pre  
ex  
ind

ire used  
'onsumer

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 \_\_\_\_\_

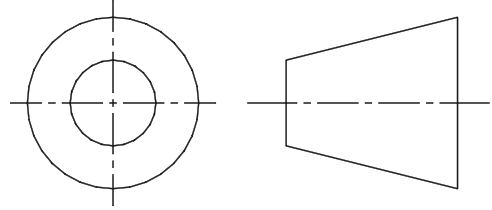


## Homework 9

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.

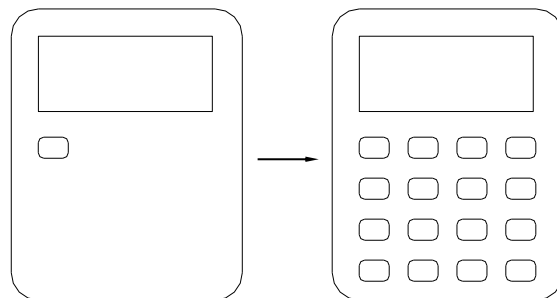
Orientation 1 \_\_\_\_\_ Orientation 2 \_\_\_\_\_

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 \_\_\_\_\_

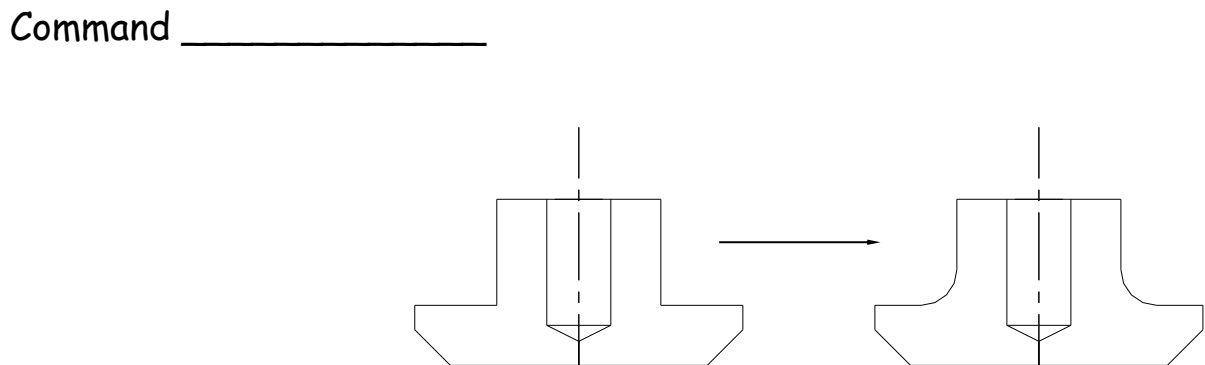
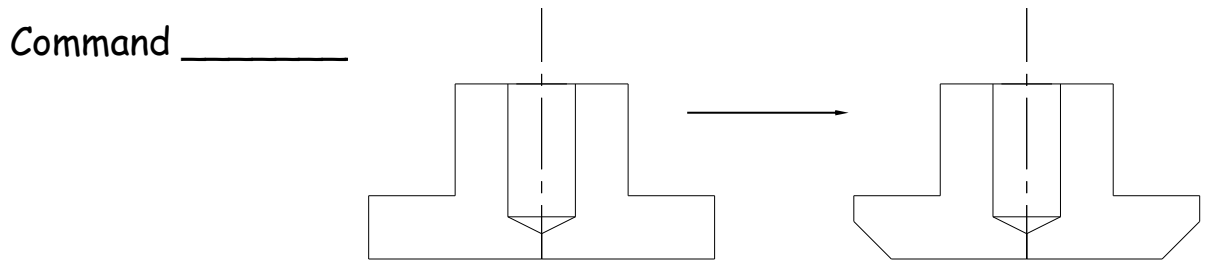
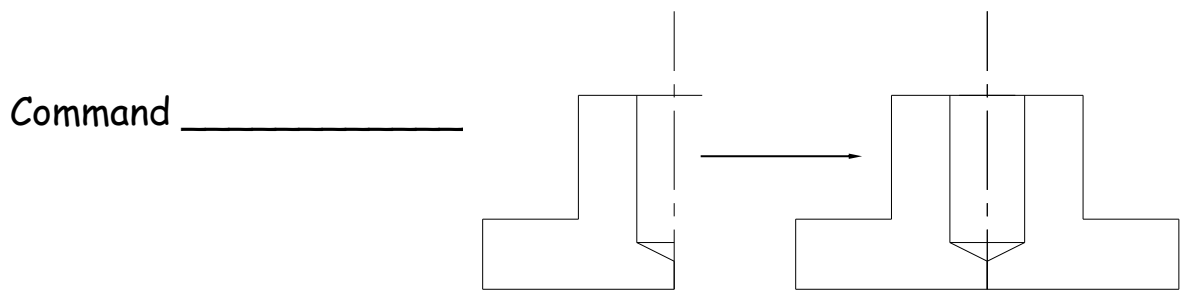
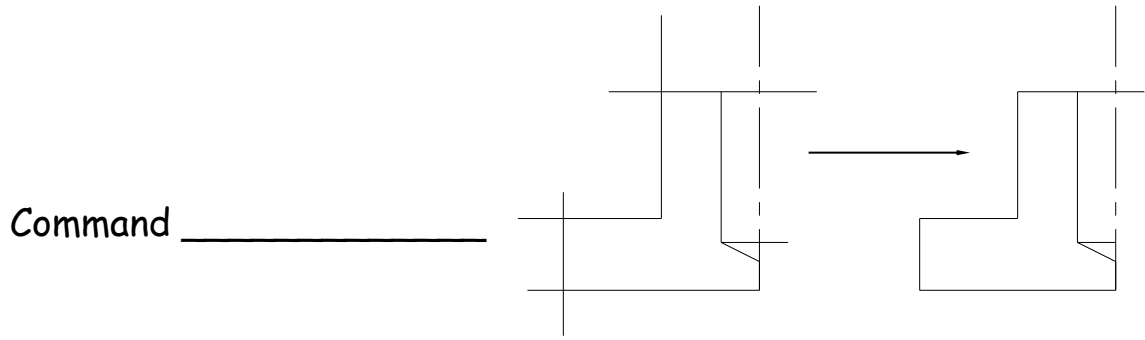
Q56. State the CAD command used to create the eight buttons on the calculator. State the feature used to create the calculator body.

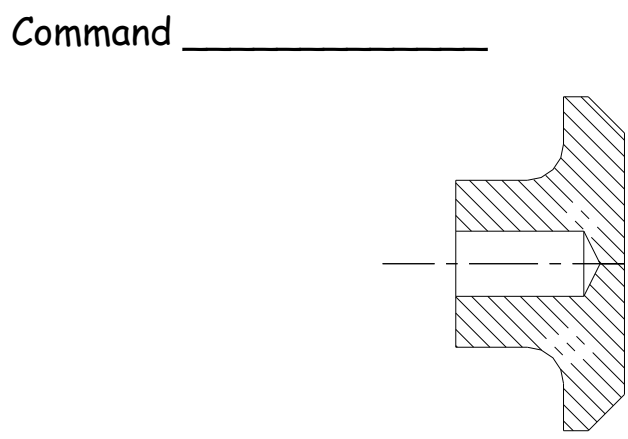
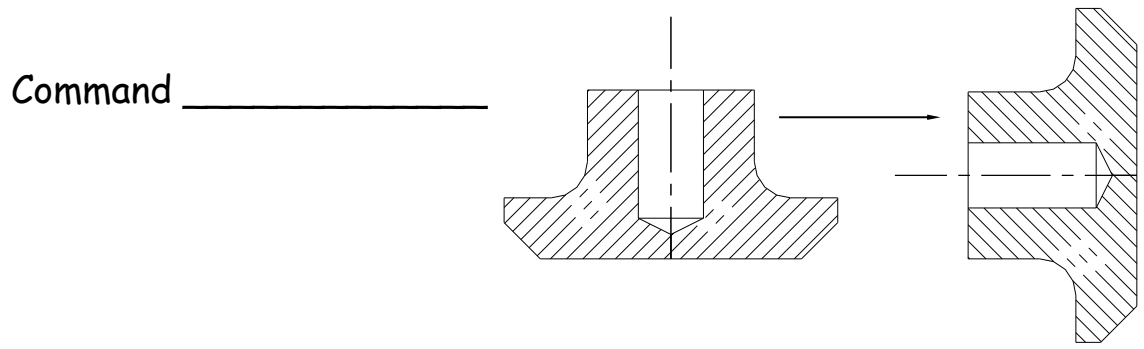
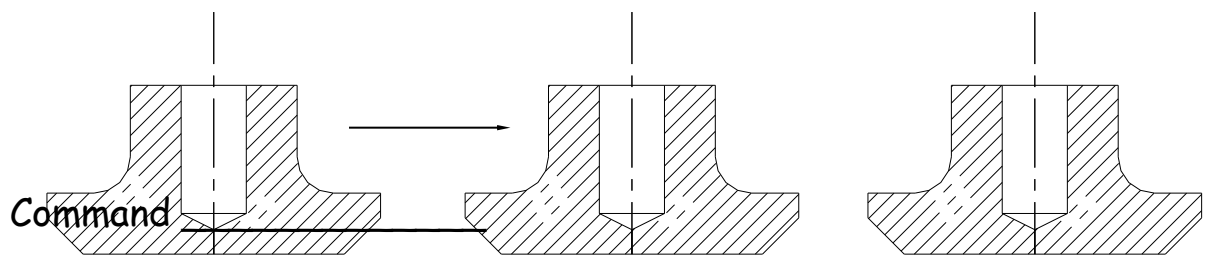
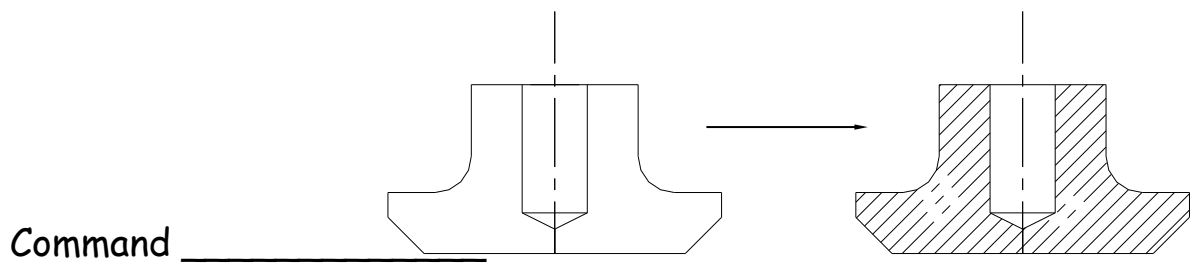
Feature \_\_\_\_\_



\_\_\_\_\_ button to be used in \_\_\_\_\_

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





- 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.

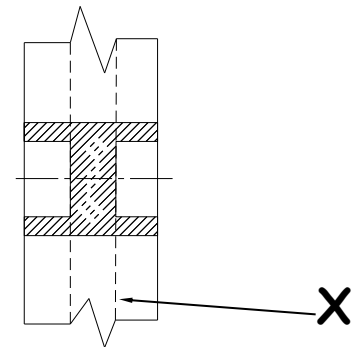
**Hardware** \_\_\_\_\_

- (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**.

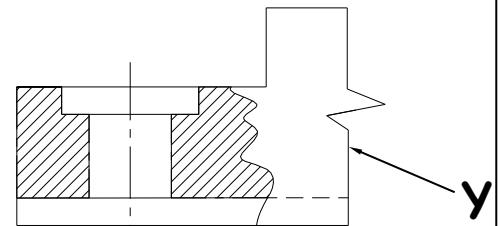
\_\_\_\_\_



**Drawing 1**

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

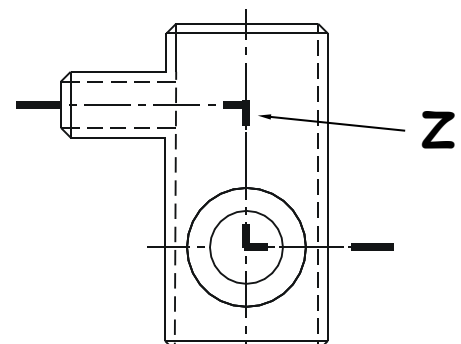
\_\_\_\_\_



**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

## Colour Theory

**Primary**

The secondary colours were placed alongside its two primary colours, i.e. violet was placed next to blue and red.

Primary colours; red, blue and yellow are the three colours which when mixed equally produce all other colours.

---

It was important to place colours on the wheel so that the 'connection' between the colours was clearly visible

The outer wheel was now added containing the primary, secondary and tertiary colours.

Secondary Colours; green, orange and violet are made by mixing two primary colours in equal amounts.

Tertiary colours; are created when primary and secondary colours are mixed together in equal quantities. E.g. If the Primary colour RED and the Secondary colour VIOLET were mixed together they would produce the Tertiary colour RED-VIOLET.

Page 5

Q65.

An e

(a) N

A

B

C

D

(b) State each of the DTP terms for each of the features

B - E.

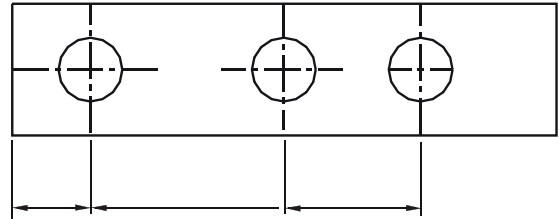
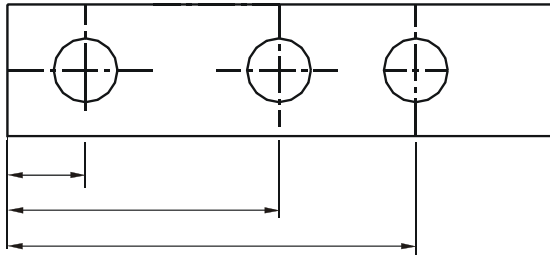
B \_\_\_\_\_

C \_\_\_\_\_

D \_\_\_\_\_

E \_\_\_\_\_

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



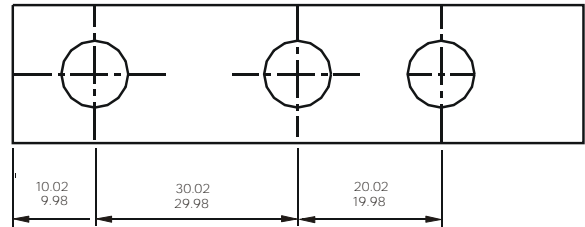
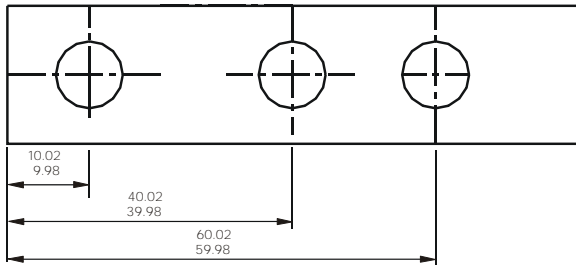
Method 1 \_\_\_\_\_

Method 2 \_\_\_\_\_

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

Explain why Method 1 would be preferable.

\_\_\_\_\_



\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



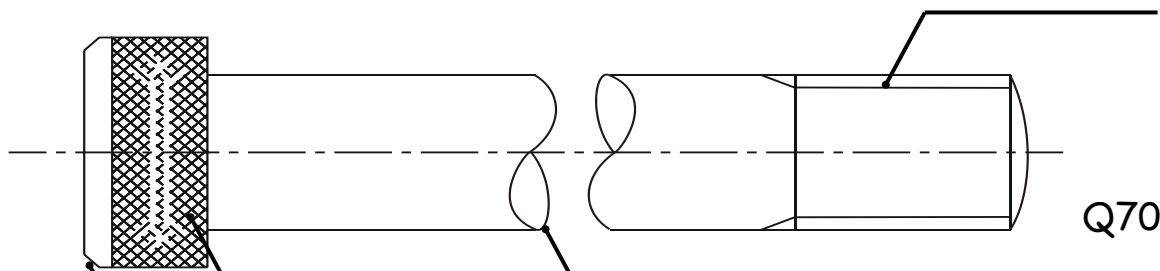
Q68. State one reason for the use of British Standards conventions on drawings.

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



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

Q70. Hatching

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

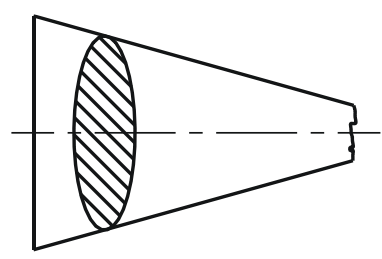
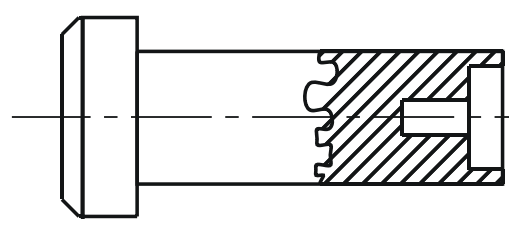
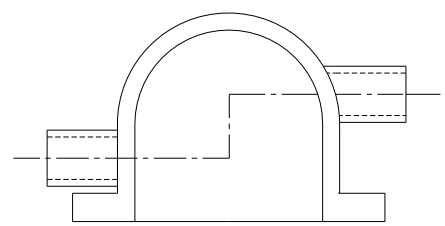
---

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

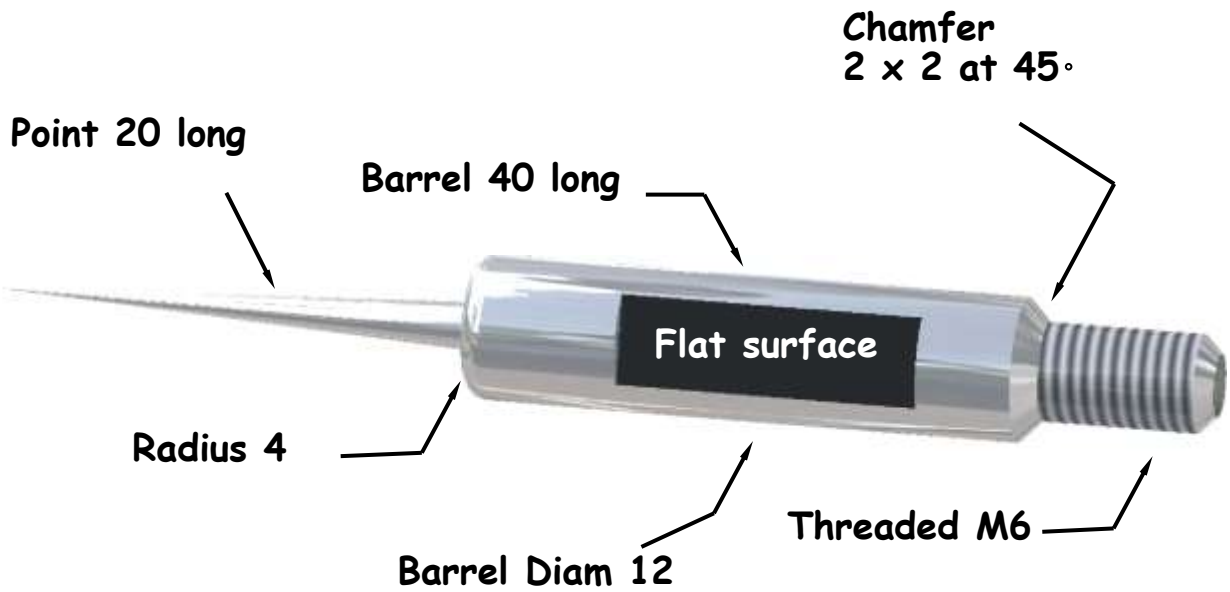
---

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

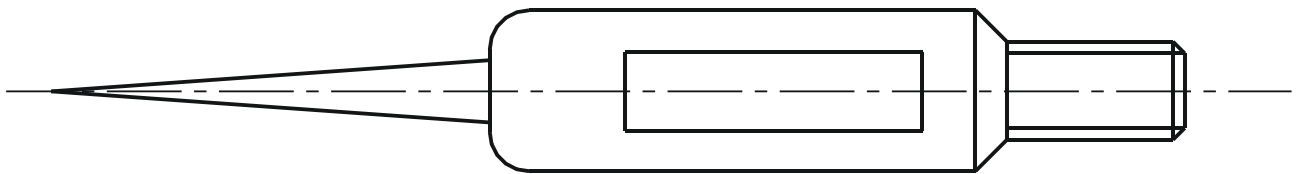
---



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



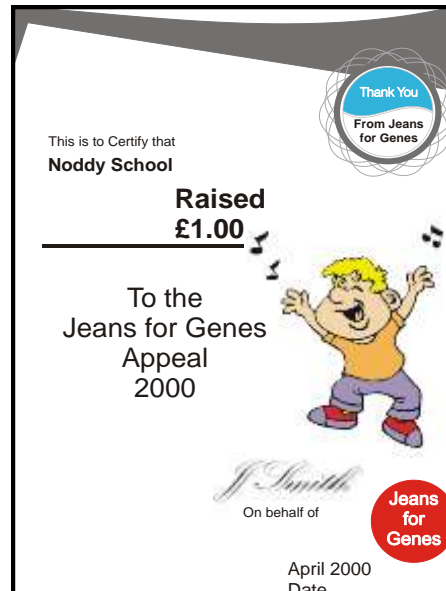
conventions, the six given sizes on the orthographic view below.

(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.



(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 \_\_\_\_\_

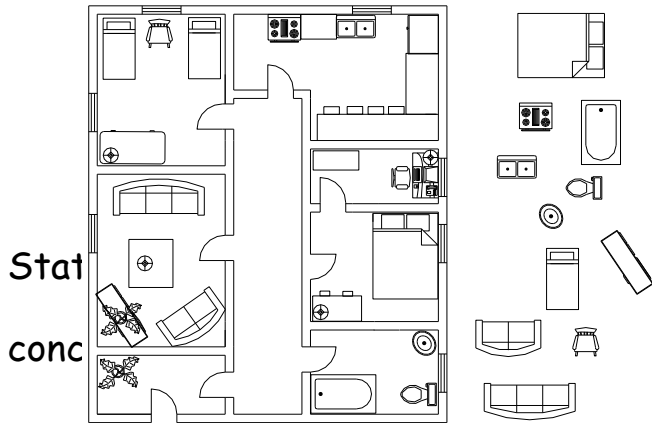
---

**Highlight** in Illustration & Presentation \_\_\_\_\_

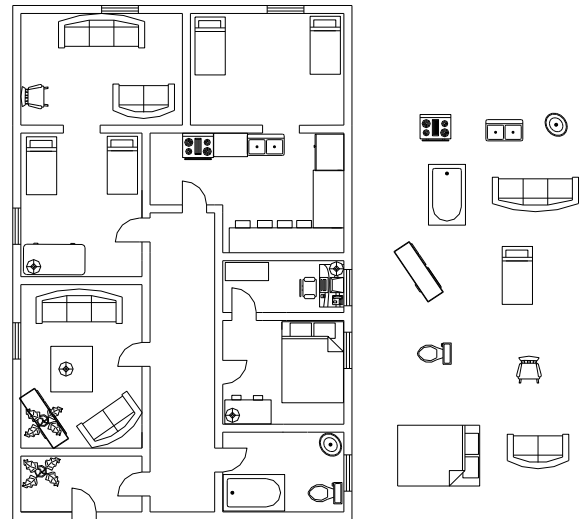
---

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

### Question



### Solution



Drawn by Tracy Whitfield 2007

---

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.

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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.

**Joe Bloggs Travel Ltd.** (D)

Egyptian Holidays a speciality (E)

Travel by Train (F)

Page 2 (B)

State the by (A)

**SHEET 1** stage indicated 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** \_\_\_\_\_  
\_\_\_\_\_

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.

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

(i) **Annotated thumbnail sketches** require 3 weeks and start immediately after the "freehand orthographic sketches". (PTO)

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 \_\_\_\_\_

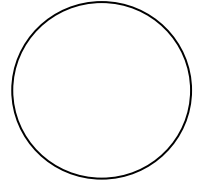
Function \_\_\_\_\_



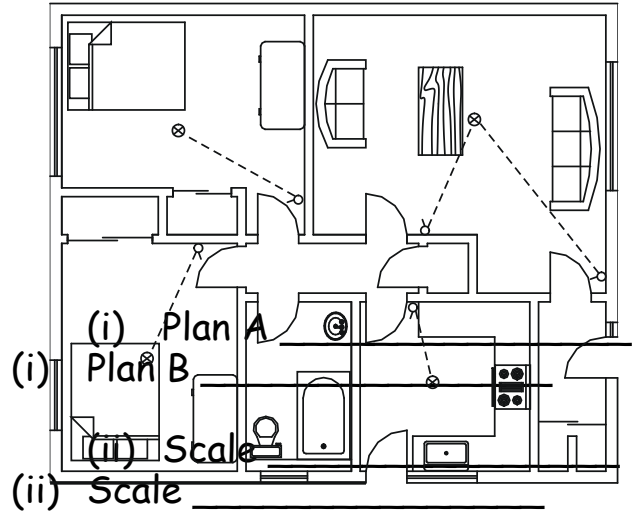
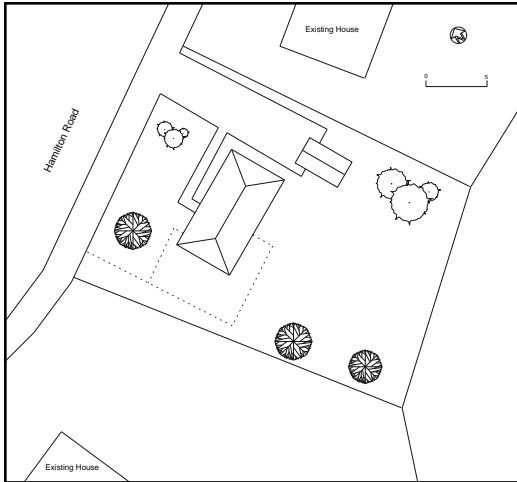
Q87. Two plans from the **same construction project** are shown below. They are **not to scale**.

State, under each plan, the appropriate

- (i) plan type
- (ii) scale



Draw a **BS North Point** here



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.

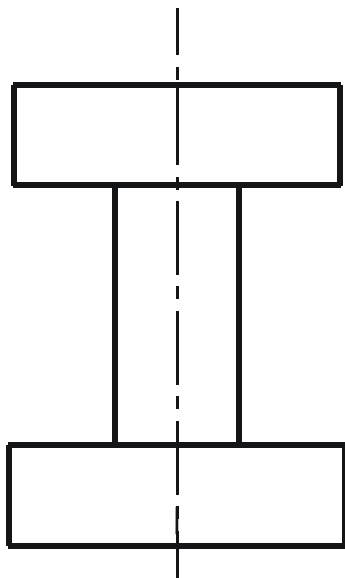
\_\_\_\_\_

\_\_\_\_\_

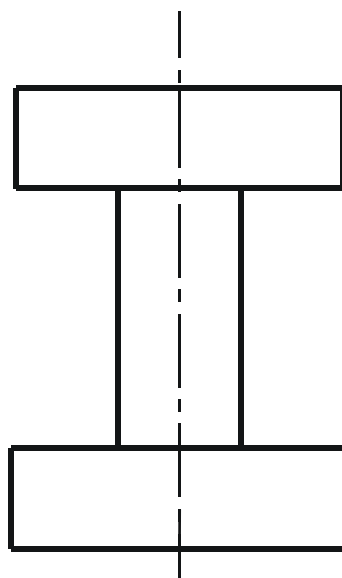


Q89. Two elevations and a pictorial view of a solid hand weight are given.

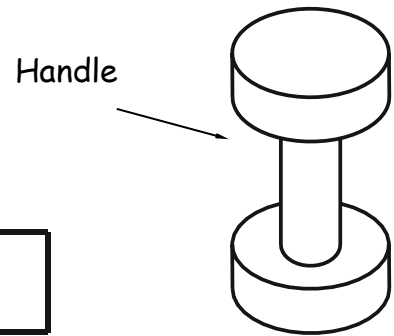
- (i) On the elevation X, sketch a revolved section of the handle.
- (ii) On the elevation Y, sketch a removed section of the handle.



ELEVATION X



ELEVATION Y



PICTORIAL VIEW

practically which are normally sectioned when a cutting plane passes longitudinally through them.

Q90. In Engineering drawing practice, state two parts are not

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) \_\_\_\_\_

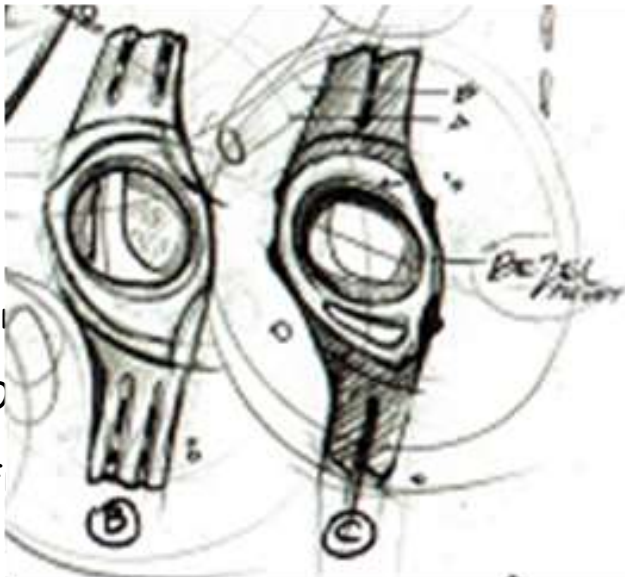
## Homework 13

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')

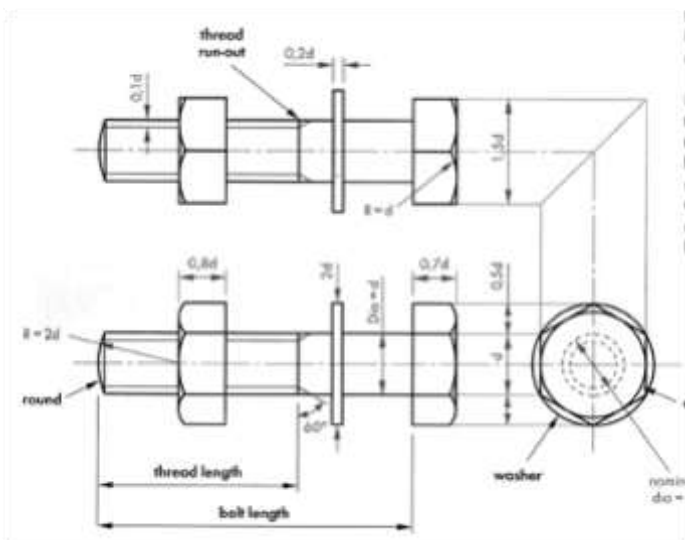
The first one has been done for you



1. P
2. C
3. F



- 1
- 2
- 3



1. \_\_\_\_\_  
 2. \_\_\_\_\_  
 3. \_\_\_\_\_

1. \_\_\_\_\_  
 2. \_\_\_\_\_  
 3. \_\_\_\_\_



1. \_\_\_\_\_  
 2. \_\_\_\_\_  
 3. \_\_\_\_\_

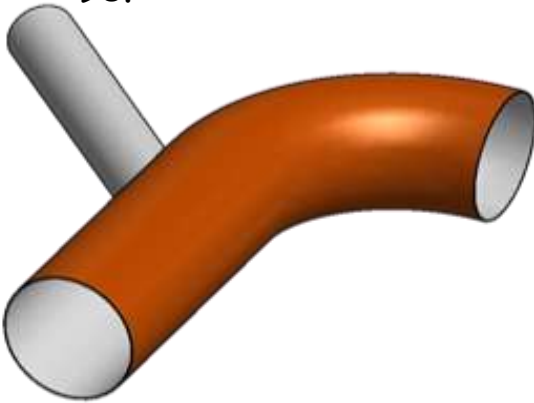


1. \_\_\_\_\_  
 2. \_\_\_\_\_  
 3. \_\_\_\_\_

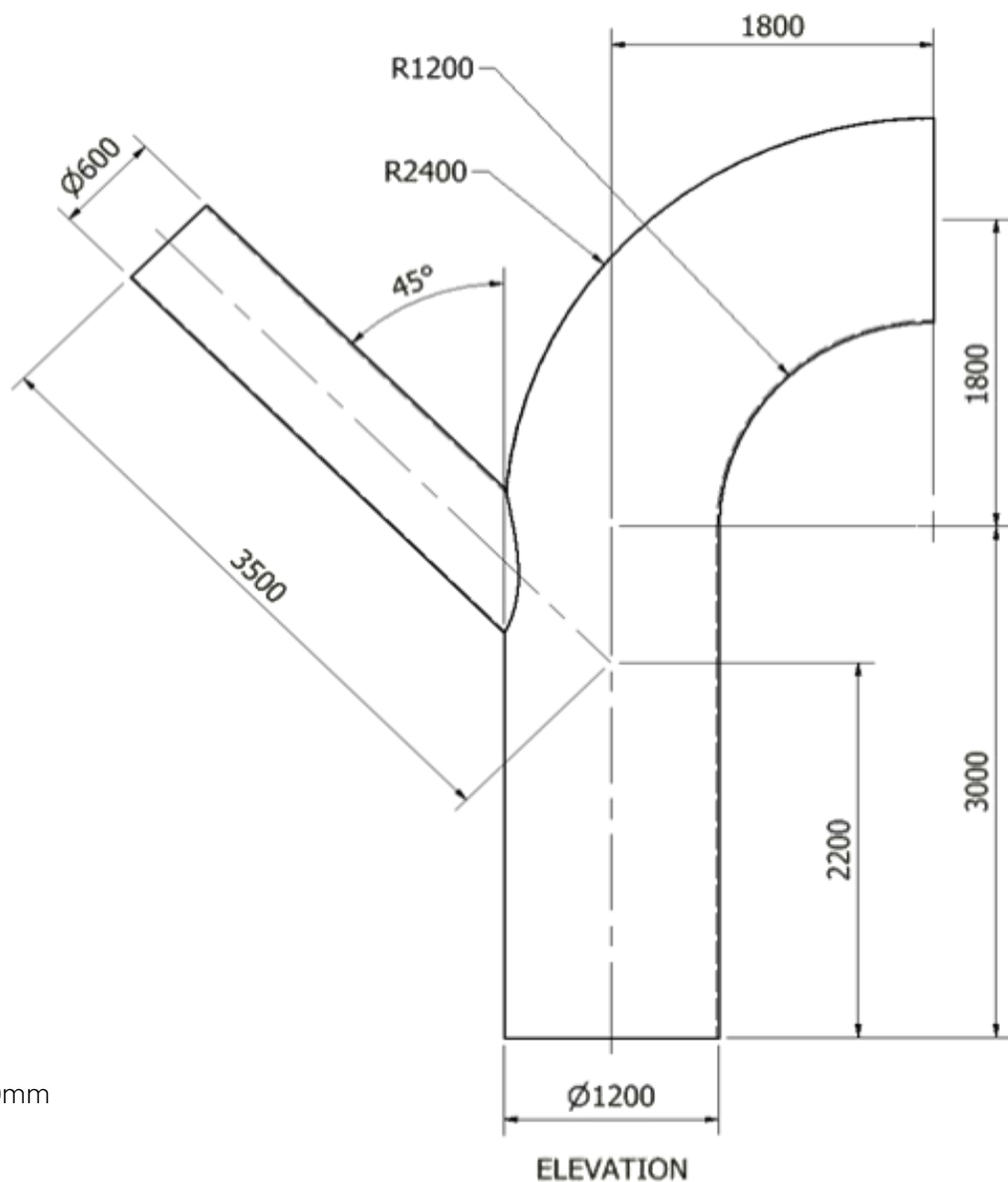
# Homework 14

## 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.

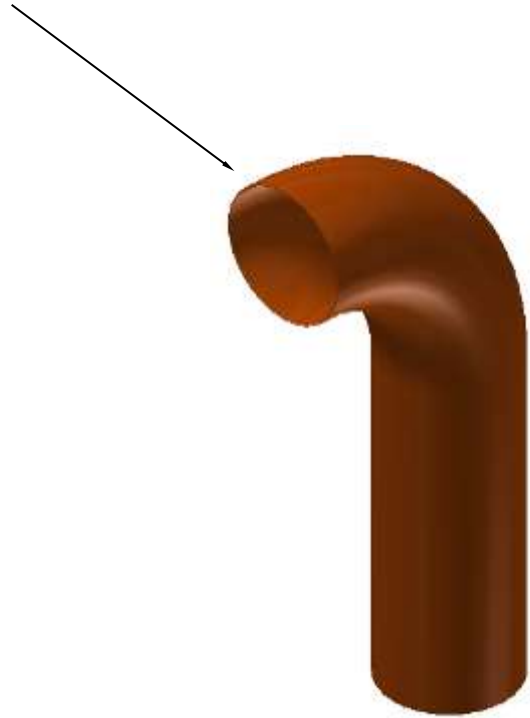


PICTORIAL VIEW OF TUBE



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.

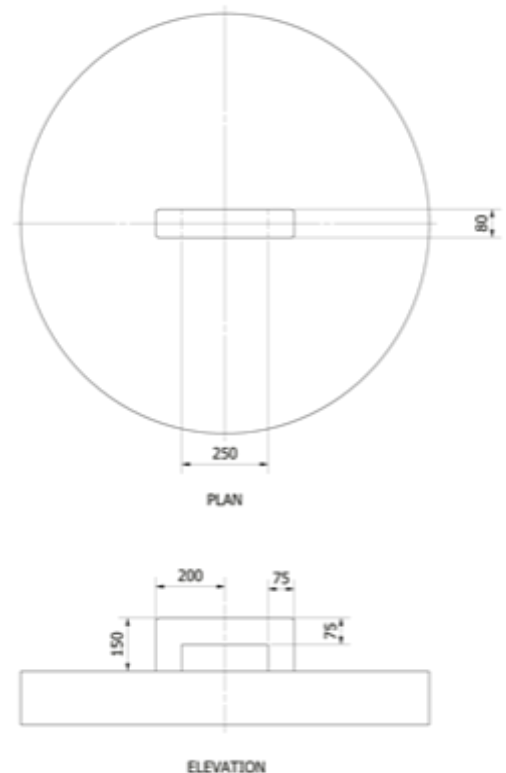
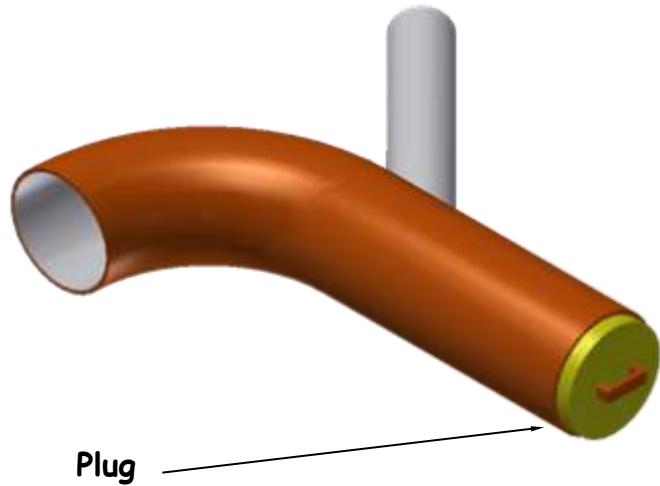


Q97 A plug has been designed to be used when the flume is not in use. State an appropriate diameter for this part (refer to the production drawing on page 54).

-----

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