

SAMPLE GRAPHIC PRODUCTS

GCSE EXAMINATION PAPER

CENTRE NUMBER

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CANDIDATE NUMBER

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SAMPLE PAPER 2

SURNAME _____

FORENAME(S) _____

CANDIDATE SIGNATURE _____

2 HOURS ALLOWED

Materials required for this examination:

- normal writing and drawing instruments
- a calculator
- a protractor.

Instructions to candidates:

- Use black ink or black ball-point pen. Use pencil only for drawing.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- You must answer the questions in the spaces provided. Do not write on blank pages.
- Do all rough work in this book. Cross through any work that you do not want to be marked.

Information

- The marks for the questions are shown in brackets.
- The maximum mark for this paper is **140**.
- Section A relates to the context given in the Preliminary Material that was previously issued. **35 marks** Section B - **105 marks**
- You are reminded of the need for good English and clear presentation in your answers. Quality of written communication will be assessed in Question 4 (a).

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SECTION A

This section is concerned with designing

Section A is about designing

You are advised to spend about 35 minutes on this question.

Design Theme: FANTASY PAPER TOY CHARACTERS.

Look at the Design Brief and Design Criteria below.

Design Brief

A manufacturer, providing pop-up booklets for a new breakfast cereal, as a promotion, has asked you to design a Fantasy Paper Toy Character. The character must be three dimensional and 'popup' when a simple story booklet is opened.



Design Criteria

You have been asked to design a pop-up fantasy paper toy character, which will be a the min feature of a pop-up booklet, placed inside the packaging of a new breakfast cereal..

The graphics must:

- be based on a 'Party / fun theme', with any text in a suitable letter style (typeface)
- display colourful images of **party / fun** characters, suitable for young children.
- appeal to children.

TO HELP YOU ANSWER THIS
QUESTION, FOLLOW THE LINKS

<http://www.technologystudent.com/despro2/toy4.html>
<http://www.technologystudent.com/despro2/toy5.html>
<http://www.technologystudent.com/despro2/toy6.html>

1a. In the four spaces below, draw four BASIC designs, for a suitable fantasy paper toy character, that could be developed into a folding 3D form. **4 x 2 marks**

TO HELP YOU ANSWER THIS
QUESTION, FOLLOW THE LINKS

<http://www.technologystudent.com/despro2/toy8.html>

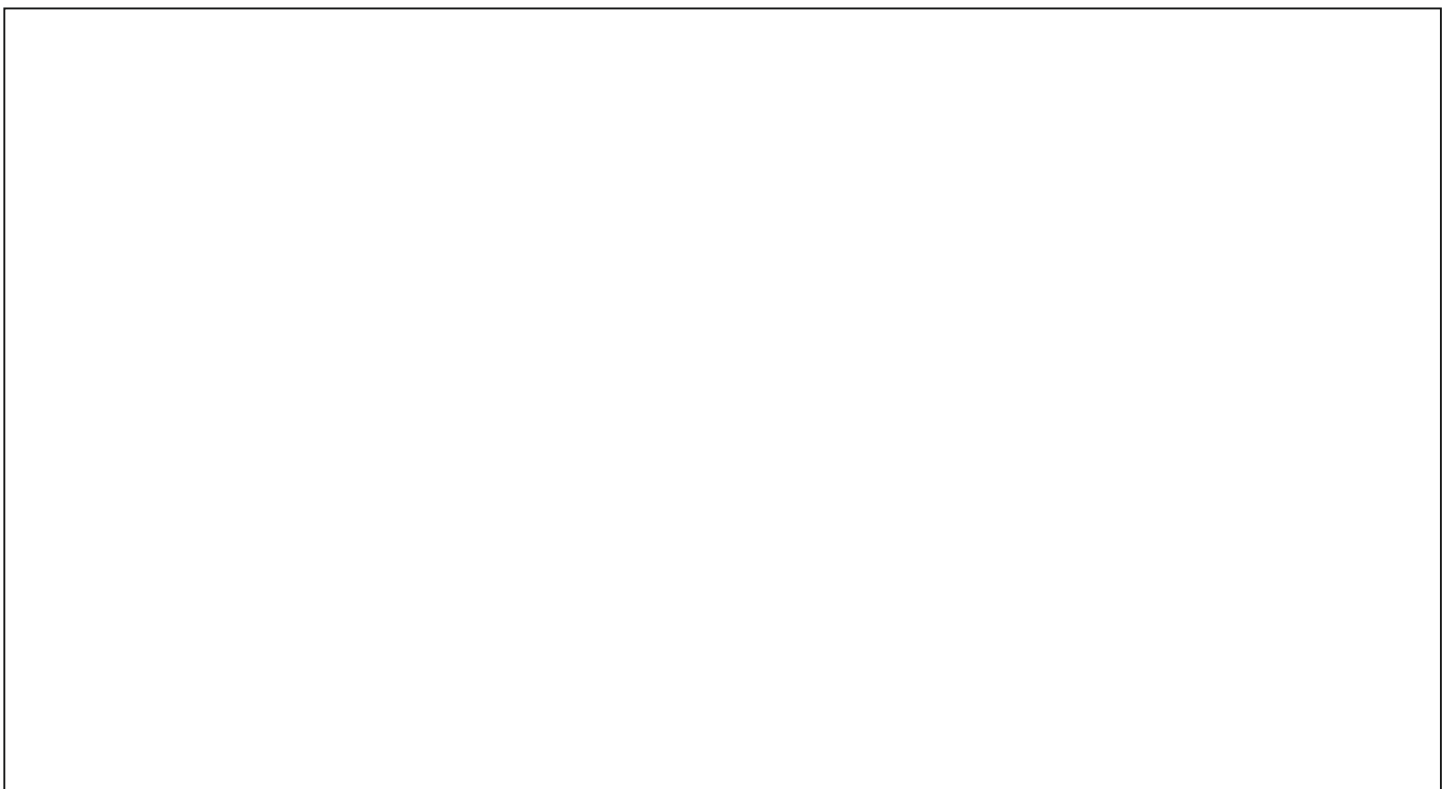
http://www.technologystudent.com/despro_flsh/graphics_popup1.html

1. The Fantasy Character will be a pop-up design. draw two 'rough' or 'outline' designs for the popup mechanism / movement. Your designs should show how the pop-up will work. Do not add colour, as this question is concerned with producing a basic outline design. **2 x 2marks**

1b. Pop-up design



1c. Pop-up design



TO HELP YOU ANSWER THIS
QUESTION, FOLLOW THE LINKS

<http://www.technologystudent.com/despro2/toy8.html>

http://www.technologystudent.com/despro_flash/graphics_popup1.html

1d. Select your best outline design for the pop-up mechanism / movement and develop it in the space below, adding notes to explain how it works. **4 marks**

TO HELP YOU ANSWER THIS
QUESTION, FOLLOW THE LINKS

<http://www.technologystudent.com/despro2/toy4.html>
<http://www.technologystudent.com/despro2/toy5.html>
<http://www.technologystudent.com/despro2/toy6.html>
<http://www.technologystudent.com/despro2/toy8.html>
http://www.technologystudent.com/despro_fish/graphics_popup1.html

1e. Using the design criteria below, produce a series of annotated sketches, to show how **ONE** of your characters (from question 1a.), can be developed into a character, that can be folded to form a 3D shape and combined with the pop-up mechanism / movement.

[11 marks]

Use the next two pages to develop your design.

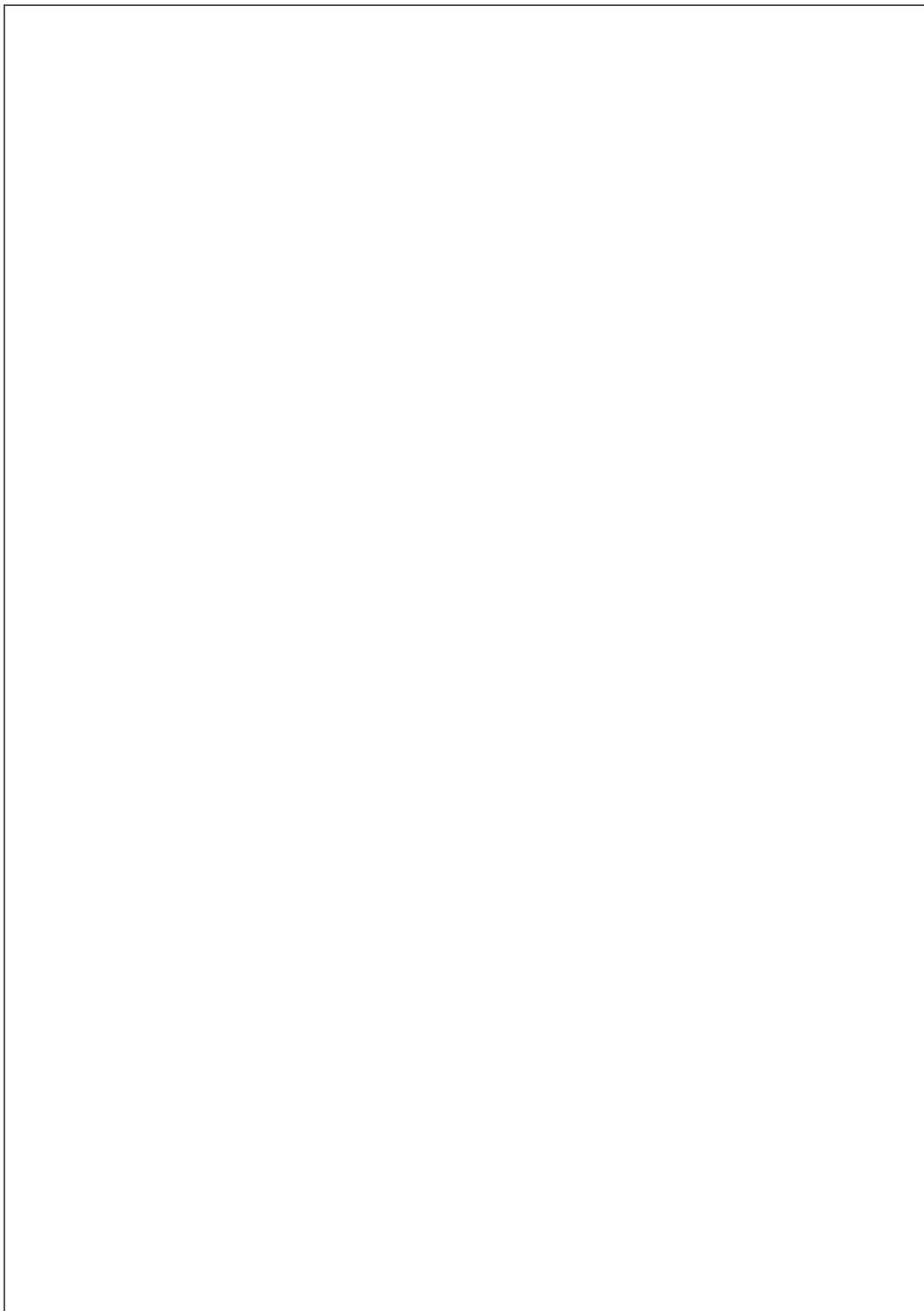
Design Criteria

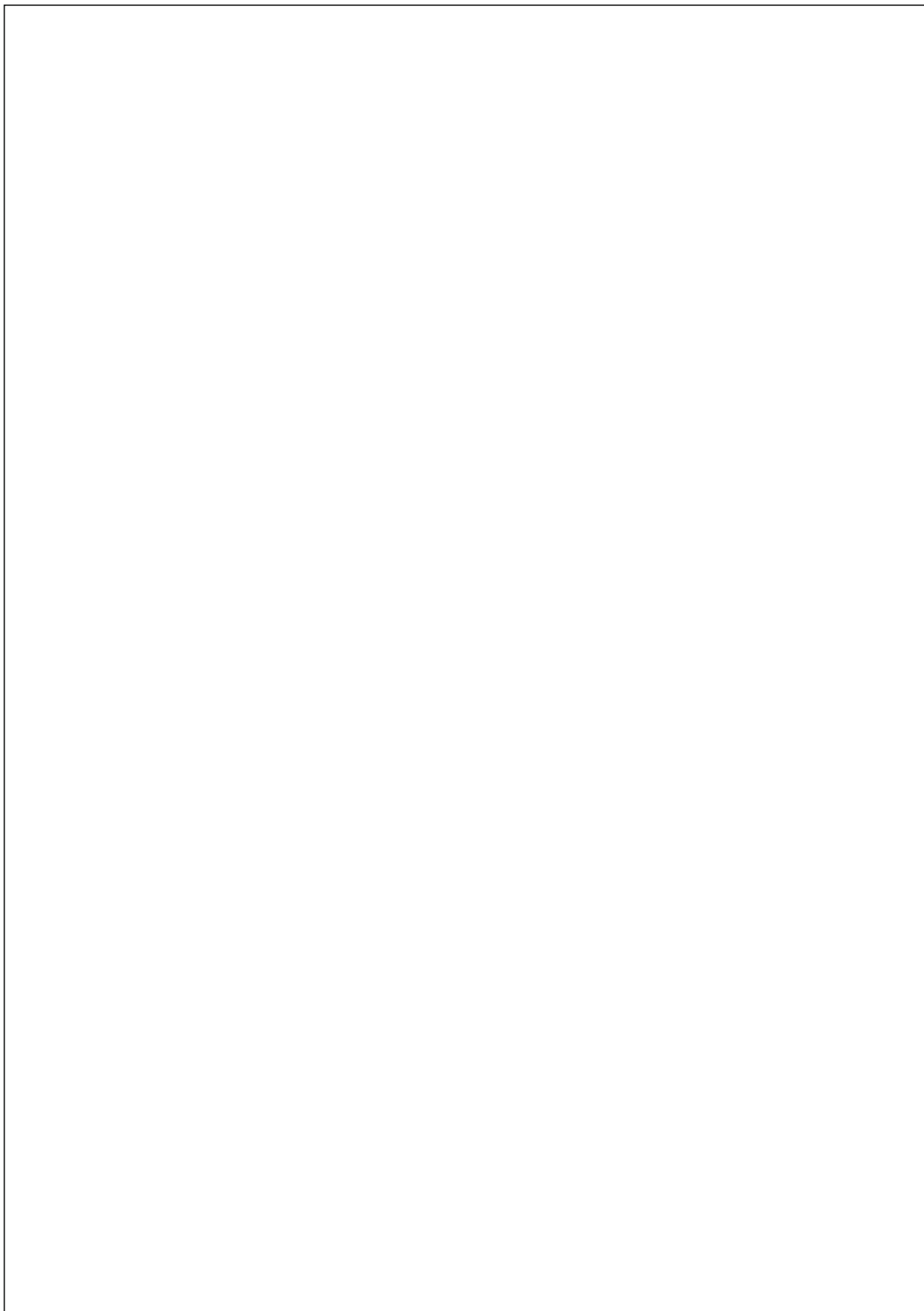
The graphics must:

- ensure that the fantasy character represents the theme 'party' / 'fun'
- include a suitable colour scheme that supports the party / fun theme.
- your chosen character must appeal to children.
- show clearly detail of the net(s) / development(s) that are folded to form the final character.

Marks will be awarded for:

- effective application of the design criteria
- creativity, imagination, originality and quality of the development, including an indication of colour
- notes explaining your sketches.





TO HELP YOU ANSWER THIS QUESTION, FOLLOW THE LINKS
FOLLOW THE LINKS ON EACH PAGE TO THE PDF FILES

<http://www.technologystudent.com/despro2/toy8.html>
<http://www.technologystudent.com/despro2/toy4.html>
<http://www.technologystudent.com/despro2/toy5.html>
<http://www.technologystudent.com/despro2/toy6.html>

1f. The Pop-up booklet will have a front cover. The pop-up mechanism and character will be inside the booklet.

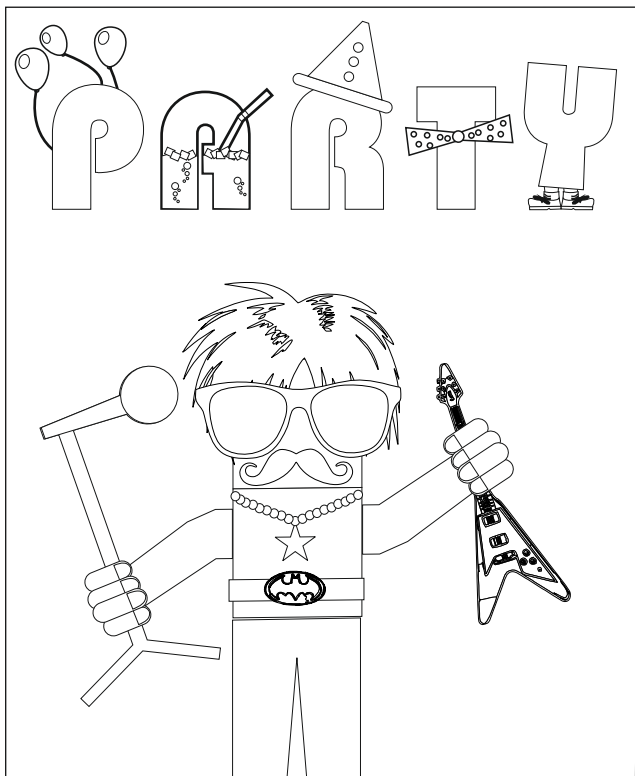
On the next page, in space 'A', draw a rough / outline version of the cover page to your popup booklet.

You will need a title and some detail regarding the illustrations.

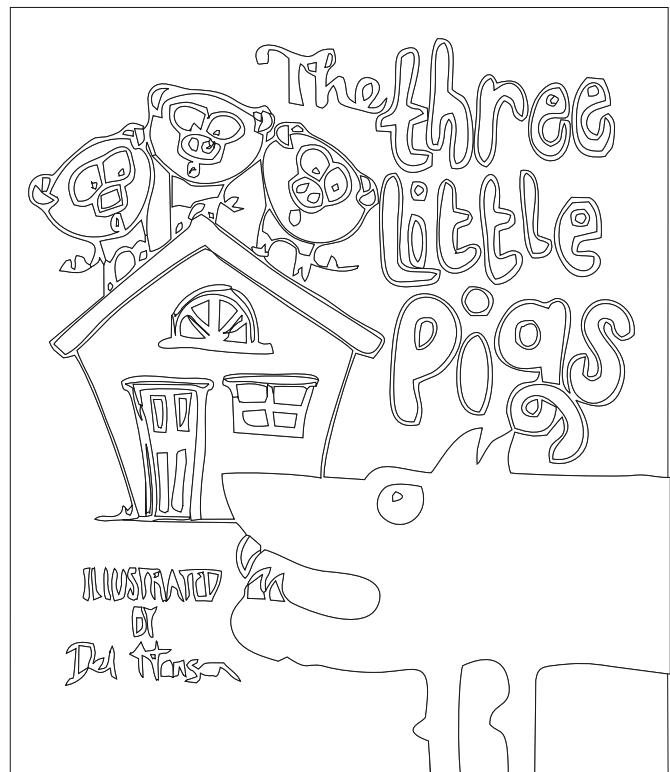
Below are two sample layouts.

Total of 5 marks

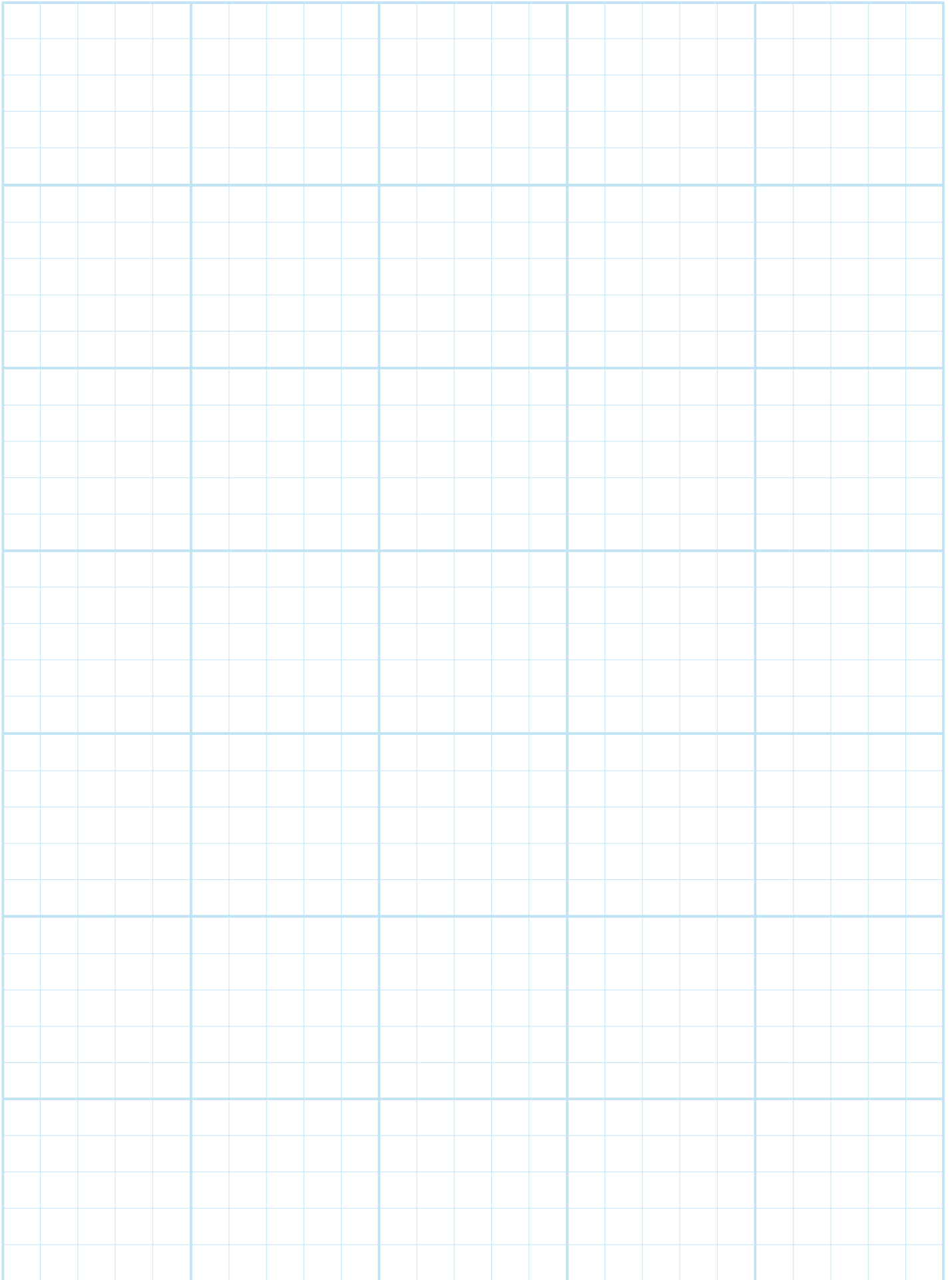
SAMPLE



SAMPLE



SPACE 'A' - ROUGH VERSION / OUTLINE



TO HELP YOU ANSWER THIS QUESTION, FOLLOW THE LINKS

<http://www.technologystudent.com/despro2/toy7.html>

1g. Evaluate your final pop-up fantasy character, against the design criteria shown below.

- ensure that the fantasy character represents the theme 'party' / 'fun'
- include a suitable colour scheme that supports the party / fun theme.
- your chosen character must appeal to children.
- show clearly, detail of the net(s) / development(s), that are folded to form the final character, minimising waste.

3 marks

SECTION B

TO HELP YOU ANSWER THIS QUESTION Follow the link below.

<http://www.technologystudent.com/designpro/quest1.htm>

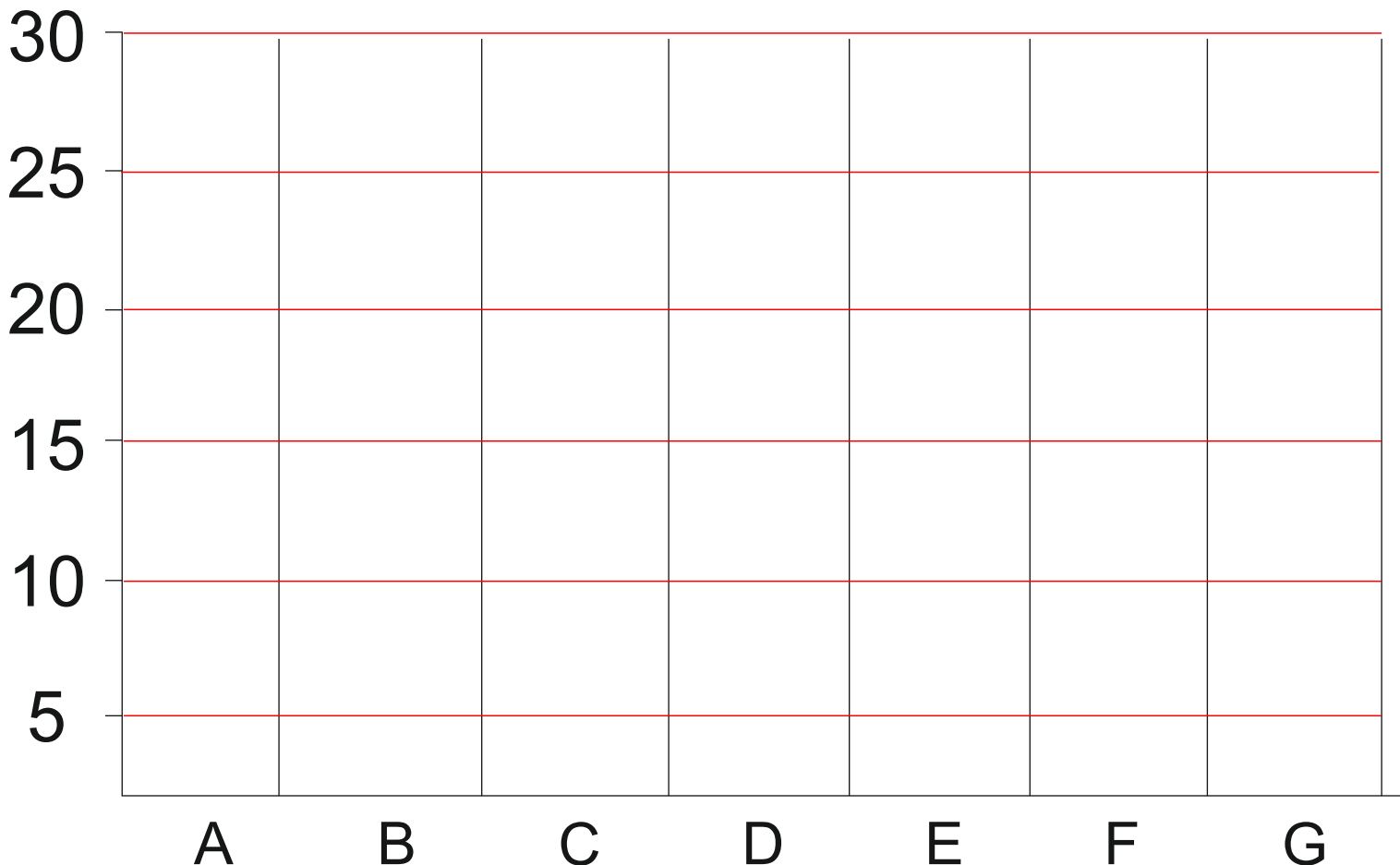
Pictograms give the opportunity to show statistics graphically. The pictures/images in a pictogram should reflect the question that has been asked. For example, if you are trying to find the most popular colour of paint, the statistics could be presented as paint brushes, in a pictogram.

2. The table opposite shows the results of a survey. 100 people were asked to name the type of alarm system they were in most need of.

Using the grid below, draw a pictogram to represent the table of results. You will gain marks for your use of colour, images and imagination.

8 marks

ALARM TYPE		No OF PEOPLE
A	BICYCLE	15
B	BRIEF CASE	20
C	DOOR	24
D	PERSONAL ALARM	5
E	CAR	7
F	PICK-POCKET	10
G	WINDOW	29
TOTAL		100



TO HELP YOU ANSWER THIS QUESTION Follow the links below.

<http://www.technologystudent.com/designpro/orthogrp1.html>

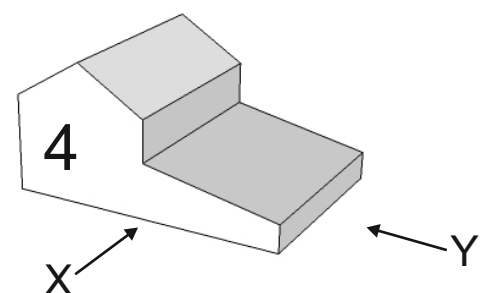
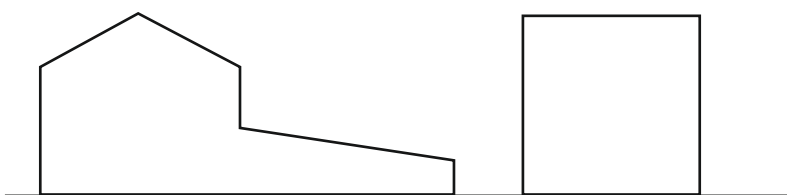
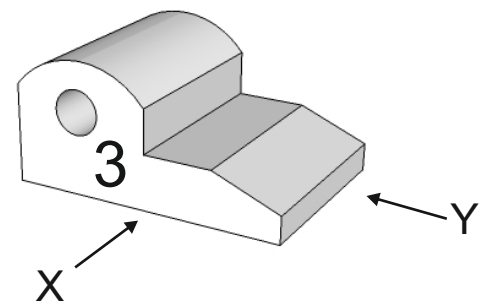
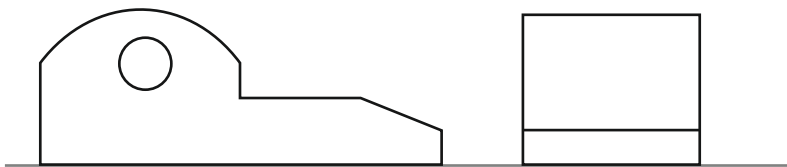
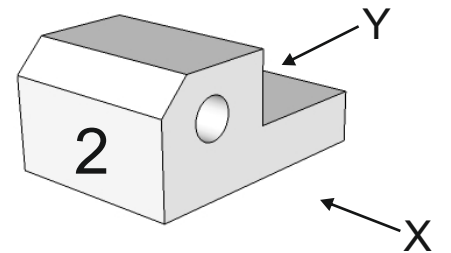
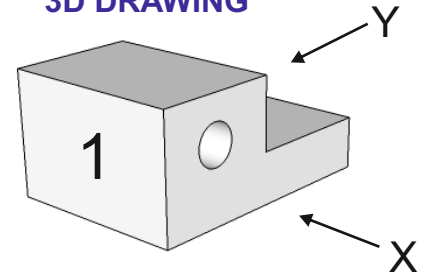
http://www.technologystudent.com/pdf15/orth1_answers.pdf

3. Complete the orthographic drawings of the 3D objects, by adding the missing lines. Remember, hidden detail is represented by a dotted line. The arrow 'X' indicates the front view. Arrow 'Y' indicates the side view. **4 x 2 marks**

FRONT

SIDE VIEW

3D DRAWING



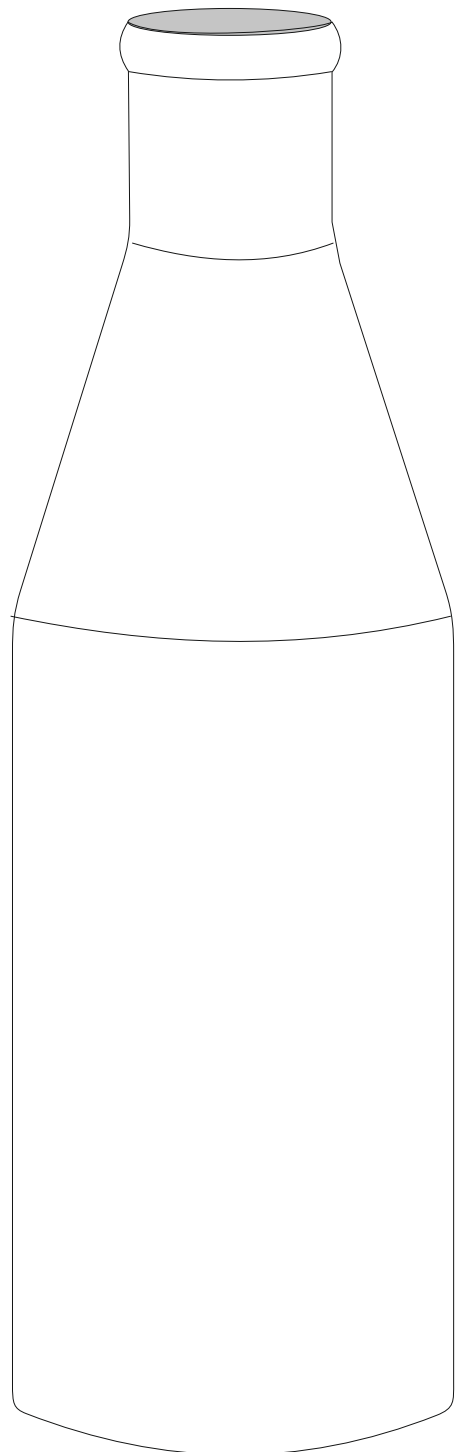
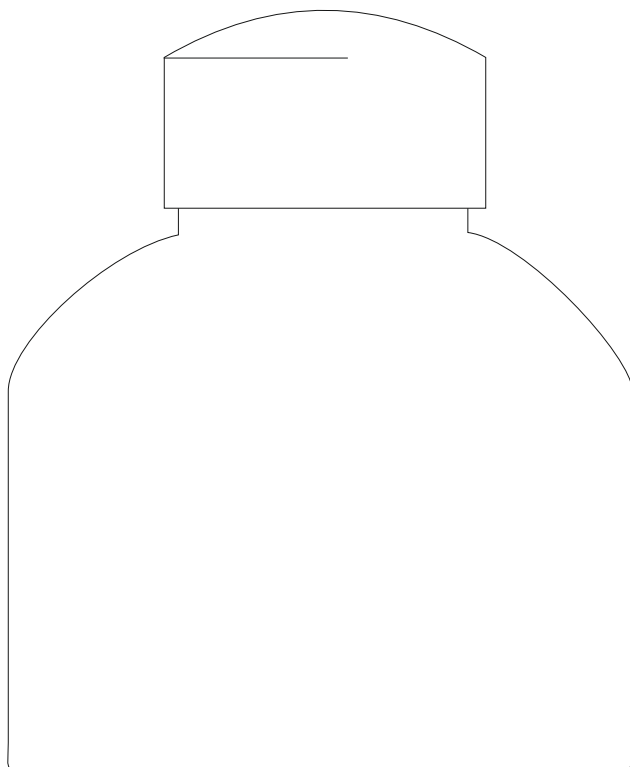
TO HELP YOU ANSWER THIS QUESTION Follow the links below.

<http://www.technologystudent.com/designpro/drawtec4.htm>

4. Adding colour to sketches often improves their final appearance.

Two bottles are shown below. Add colour to enhance their final presentation. An example of a completed colour scheme is seen opposite.

8 marks (2 x 4 marks)



TO HELP YOU ANSWER THIS QUESTION Follow the link below.

<http://www.technologystudent.com/joints/aroma1.html>

WORLD ASSOCIATION OF TECHNOLOGY TEACHERS <https://www.facebook.com/groups/254963448192823/> www.technologystudent.com © 2018 V.Ryan © 2018

5a. Designers need an understanding of smart materials. Aroma Pigments have many practical applications. What are Aroma Pigments? **2 mark**

5b. Describe two practical applications of Aroma Pigments. **2 x 3 marks**

PRACTICAL APPLICATION 1:

PRACTICAL APPLICATION 1:

TO HELP YOU ANSWER
THIS QUESTION

Follow the links below.

<http://www.technologystudent.com/designpro/pricol1.htm>

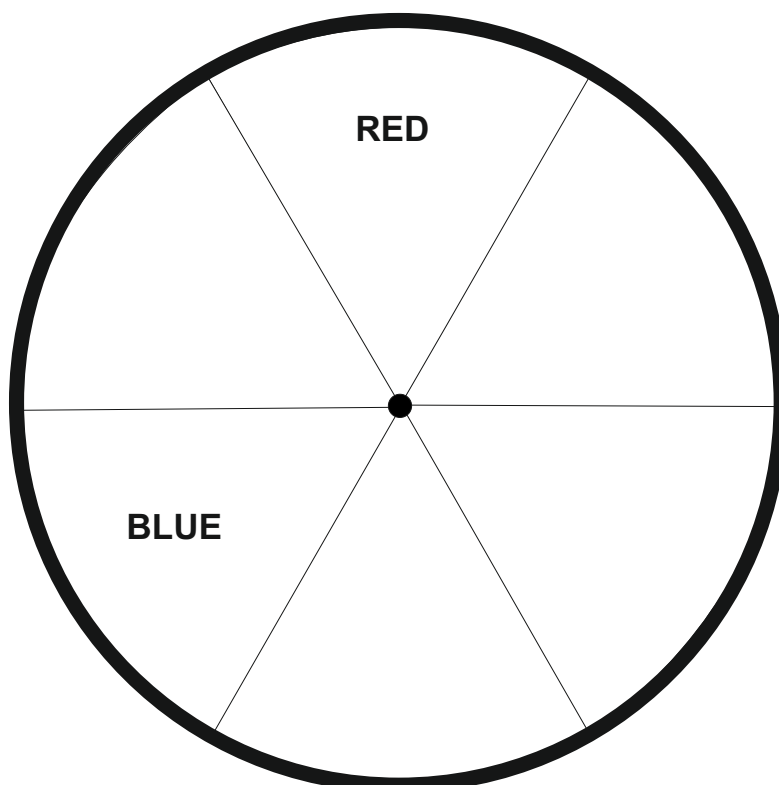
6a. Name the three primary colours. **3 marks**

6b. Complete the table below by adding the missing colours. **3 marks**

YELLOW	+		=	GREEN
BLUE	+	RED	=	
	+	YELLOW	=	ORANGE

6c. What are secondary colours? **1 mark**

6d. The colour wheel drawn below is missing its colours. Add the correct colours using coloured pencils. The wheel should accurately represent a colour wheel. **3 marks**



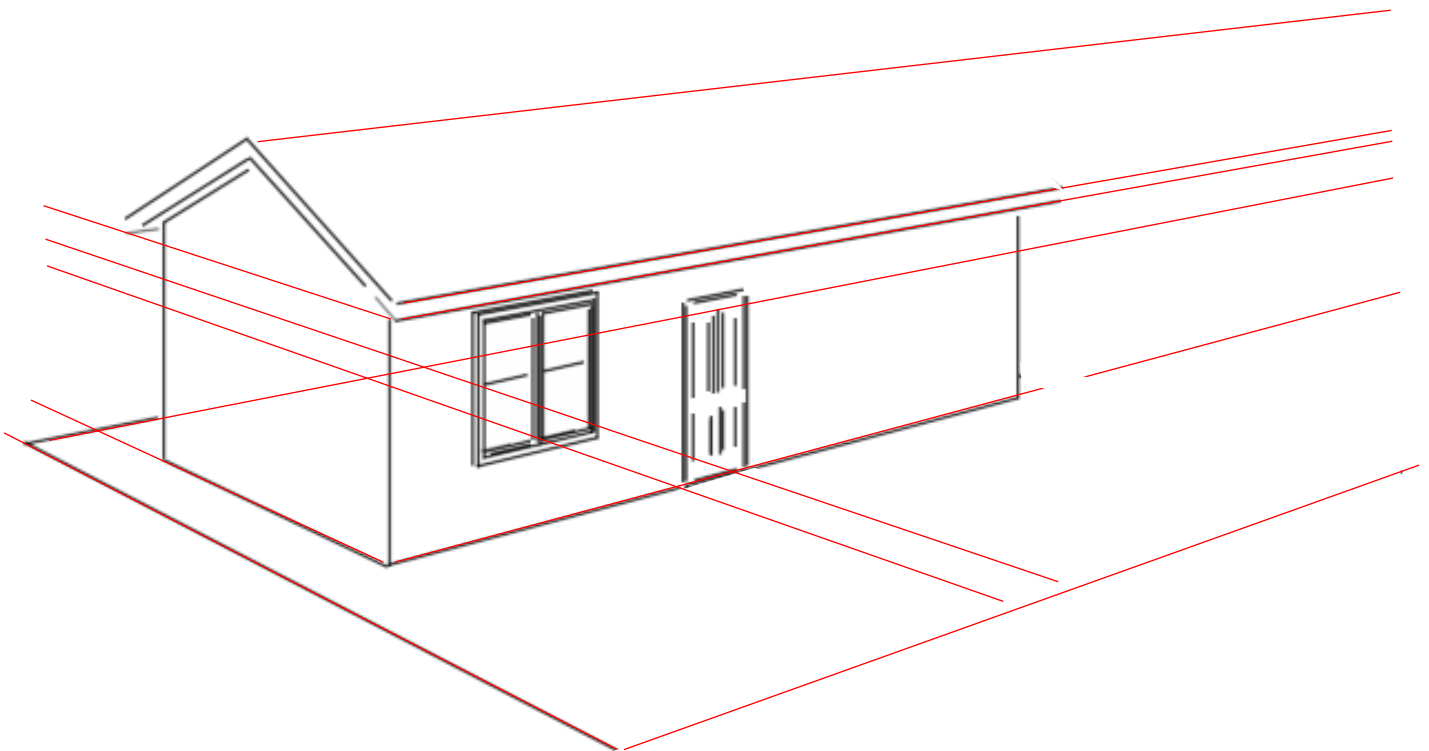
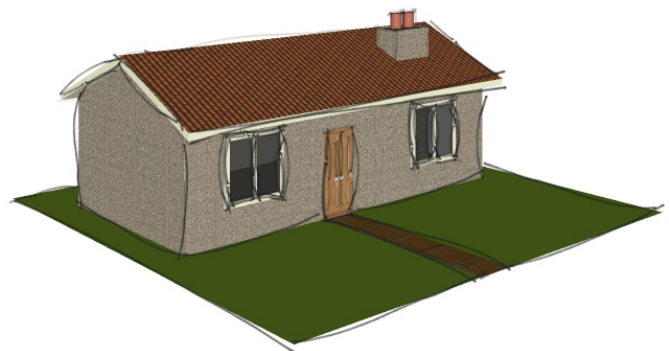
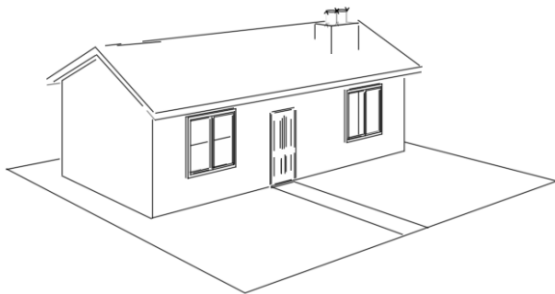
TO HELP YOU ANSWER THIS QUESTION Follow the links below.

<http://www.technologystudent.com/designpro/perhous2.htm>

7. Complete the two point estimated perspective drawing of the single storey house.

Complete the outline of the house. **3 marks**

Add colour and shade. **3 marks**



TO HELP YOU ANSWER THIS QUESTION Follow the link below.

<http://www.technologystudent.com/prddes1/plannedob1.html>

<http://www.technologystudent.com/prddes1/plannedob2.html>

Designers need an understanding of Planned Obsolescence and Perceived Obsolescence.

8a. What is meant by the term **Planned Obsolescence**? *4 marks*

8b. What is meant by the term **Perceived Obsolescence**? *4 marks*

TO HELP YOU ANSWER THIS QUESTION Follow the link below.

http://www.technologystudent.com/despro_flish/new_problem1.html

9a. Before designers spend time working on a solution to a design problem, they need to collect evidence, that the problem is one that is worth solving. How is this evidence collected? **2 marks**

TO HELP YOU ANSWER THIS QUESTION Follow the link below.

http://www.technologystudent.com/despro_flish/focusres1.html

9b. Why is it important to carry out focussed analytical research of existing products, before designing a new /improved product? **2 marks**

TO HELP YOU ANSWER THIS QUESTION Follow the links below.

http://www.technologystudent.com/despro_flish/anmood1.html
<http://www.technologystudent.com/prddes1/moody1.html>

9c. What is a moodboard? **1 mark**

9d. How can a moodboard be used for analytical research? **2 marks**

TO HELP YOU ANSWER THIS QUESTION Follow the links below.

<http://www.technologystudent.com/despro2/crdpap2.htm>

<http://www.technologystudent.com/despro2/pkmat1.htm>

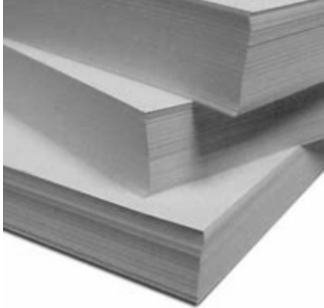

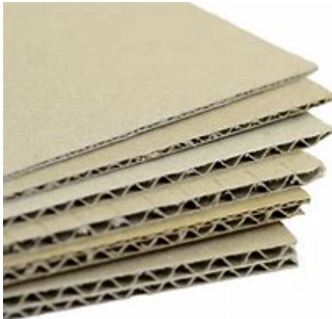

http://www.technologystudent.com/despro_fish/laminate1.html

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10. For each material listed below, describe the material and give one practical application. An example has been completed for you. **2 x 7 marks (14 marks)**

MATERIAL	DESCRIPTION AND PRACTICAL APPLICATION
<p data-bbox="220 555 625 593">CARTRIDGE PAPER</p> 	<p data-bbox="810 591 1485 878"><i>Used for general drawing and photocopying. It is good quality and generally 100 to 135g in thickness. This paper is used for design work, sketching and letter writing. It will take colour from felt pens, without leaking/bleeding through to the paper.</i></p>
<p data-bbox="245 967 584 1005">DUPLEX BOARD</p> 	<hr/> <hr/> <hr/> <hr/> <hr/>
<p data-bbox="201 1379 667 1417">CORRUGATED BOARD</p> 	<hr/> <hr/> <hr/> <hr/> <hr/>
<p data-bbox="245 1792 641 1830">FOIL LINED BOARD</p> 	<hr/> <hr/> <hr/> <hr/> <hr/>

TO HELP YOU ANSWER THIS QUESTION Follow the links below.

<http://www.technologystudent.com/despro2/crdpap2.htm>


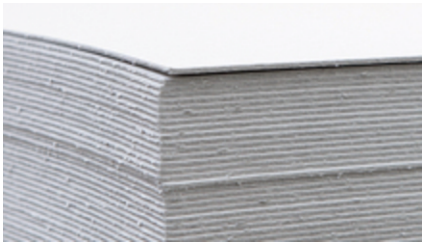


<http://www.technologystudent.com/despro2/pkmat1.htm>

http://www.technologystudent.com/despro_flsh/laminate1.html

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MATERIAL	DESCRIPTION AND PRACTICAL APPLICATION
<p data-bbox="245 443 596 488">TRACING PAPER</p> 	<hr/> <hr/> <hr/> <hr/> <hr/>
<p data-bbox="197 860 643 904">SOLID WHITE BOARD</p> 	<hr/> <hr/> <hr/> <hr/> <hr/>
<p data-bbox="309 1285 564 1330">ALUMINIUM</p> 	<hr/> <hr/> <hr/> <hr/> <hr/>
<p data-bbox="248 1688 628 1733">LAMINATED CARD</p> 	<hr/> <hr/> <hr/> <hr/> <hr/>

TO HELP YOU ANSWER
THIS QUESTION

Follow the link below.
<http://www.technologystudent.com/rmprp07/glidir2.html>

11a. Die Cutting is an important industrial process. Using notes and a sketch(s), explain this process. **5 marks**

TO HELP YOU ANSWER
THIS QUESTION

Follow the link below.
<http://www.technologystudent.com/despro2/prneff4.htm>

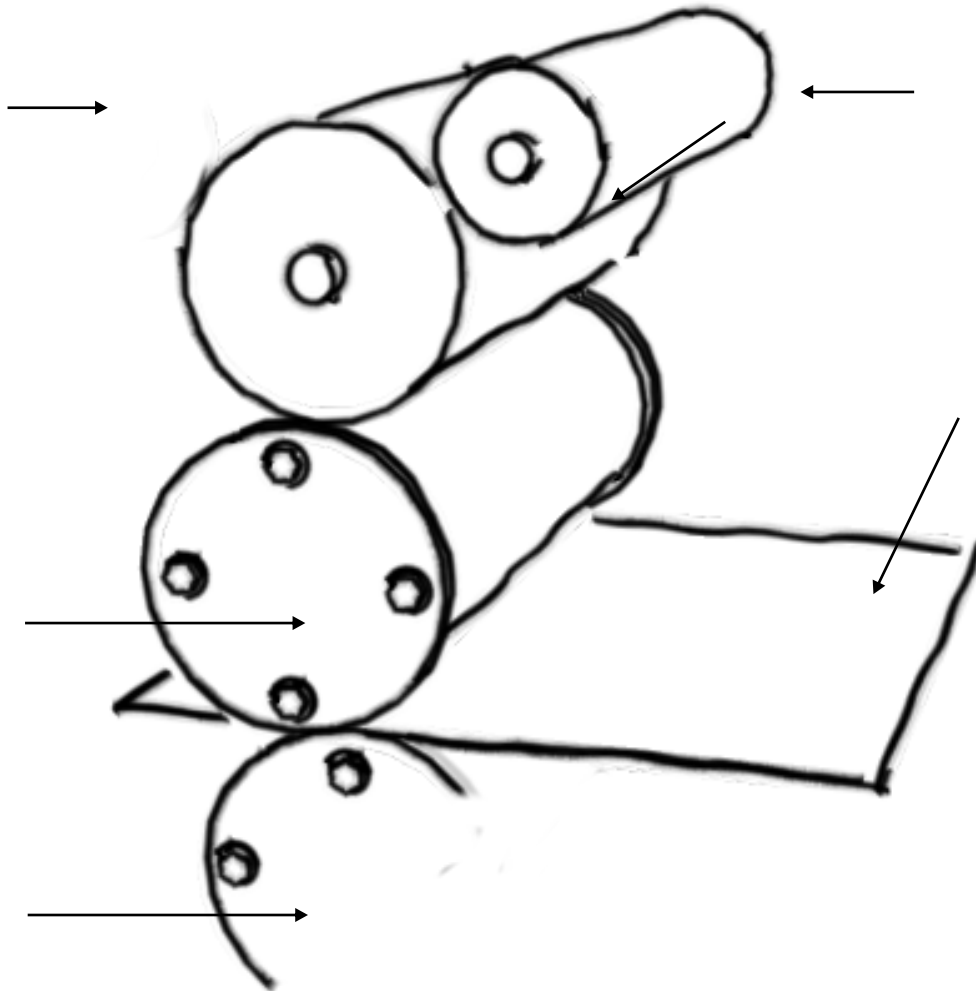
11b. Embossing is a printing effect. Using notes and a sketch(s), explain the process. **5 marks**

TO HELP YOU ANSWER
THIS QUESTION

Follow the link below.
<http://www.technologystudent.com/designpro/prtpro5.htm>

12a. An incomplete sketch of the printing process called **lithography** is drawn below. Complete the sketch by adding the missing parts and labelling the final drawing. Most of the important parts are listed : **3 marks**

PRINTING PLATE - WATER - IMPRESSION CYLINDER - INK - BLANKET CYLINDER



12b. Explain how lithography works, as shown by the sketch above. **2 marks**

This question is focussed on materials and also symbols.

TO HELP YOU ANSWER
THIS QUESTION

http://www.technologystudent.com/despro_fish/eurosym1.html
<http://www.technologystudent.com/despro2/mrsym1.htm>

13. Three important symbols are seen below. Complete the table by adding the symbol letter to the correct description. **3 marks**

A



B



C



LETTER	DESCRIPTION
	Found on packaging that contains potentially harmful contents. For example, a tin of paint stripper.
	In the past many products were tested on animals to ensure that they were safe for use by humans. Today this type of testing is regarded as being inhumane to animals as it inflicts unnecessary pain and suffering. Products carrying this type of symbol have not been tested on animals.
	The Ecolable is a scheme managed by the European Union (see symbol opposite). It was established in 1992 and aims to promote products and services that are environmentally friendly.

TO HELP YOU ANSWER
THIS QUESTION

<http://www.technologystudent.com/prddes1/advert1.html>

14a. Advertising is one way of promoting a product and increasing sales. Give four reasons how advertising helps to promote products. **4 marks**

REASON 1:

REASON 2:

REASON 3:

REASON 4:

TO HELP YOU ANSWER
THIS QUESTION

<http://www.technologystudent.com/prddes1/advert2.html>

14b. Describe how advertising has been used to promote a product of your choice. **3 marks**

PRODUCT NAME:

DESCRIPTION:

TO HELP YOU ANSWER
THIS QUESTION

http://www.technologystudent.com/despro_flesh/charity10.html

14c. The charity collection box below is flat packed. It is left 'flat' outside a household and the owners form it into a carrying box (with handle). The box is filled with unwanted clothes and left on the doorstep, for the charity to collect later.

Why is CORRUGATED PLASTIC (POLYPROPYLENE) a suitable material for this product? **3 marks**

