

Candidate Name	Centre Number	Candidate Number
		0



**GCSE**

140/02

**DESIGN AND TECHNOLOGY**

**PAPER 2**

**FOCUS AREA: GRAPHIC PRODUCTS**

**Foundation Tier**

A.M. MONDAY, 2 June 2008

1½ hours

	Leave Blank
Question 1	
Question 2	
Question 3	
Question 4	
Question 5	
<b>TOTAL MARK</b>	

**ADDITIONAL MATERIALS**

You will need basic drawing equipment and coloured pencils for this examination.

**INSTRUCTIONS TO CANDIDATES**

Write your name, centre number and candidate number in the spaces at the top of this page.

Answer **all** questions.

Write your answers in the spaces provided in this booklet. Where the space is not sufficient for your answer, continue the answer at the back of the book, taking care to number the continuation correctly.

**INFORMATION FOR CANDIDATES**

The number of marks is given in brackets at the end of each question or part-question.

Answer **all** questions in the spaces provided.

- 1. The photographs show pieces of graphics equipment.  
**Study each** photograph and then complete the sentences that follow.

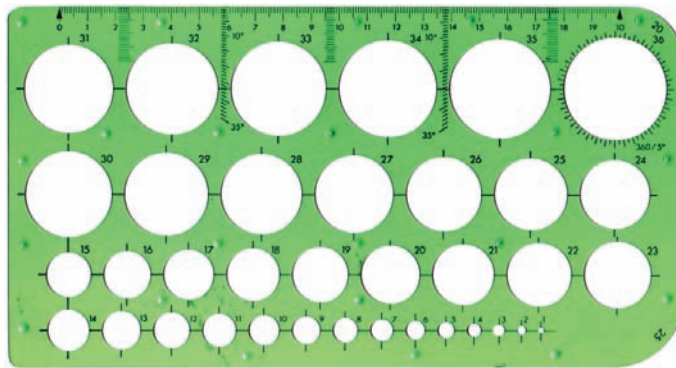
(a)



The full name of this piece of equipment is a ..... and ..... [2]

It is used to ..... [2]

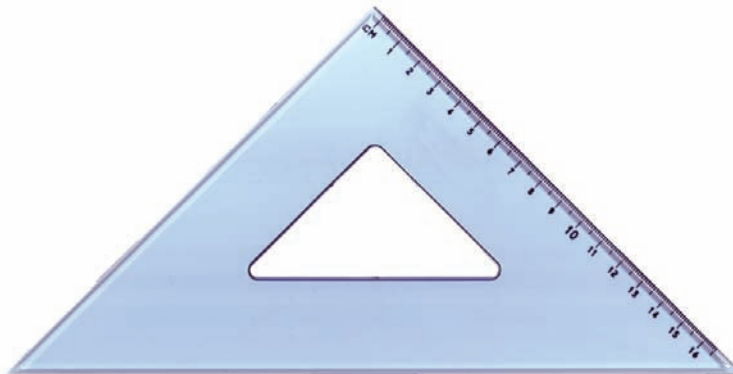
(b)



The full name of this piece of equipment is a ..... [2]

It is used to ..... [2]

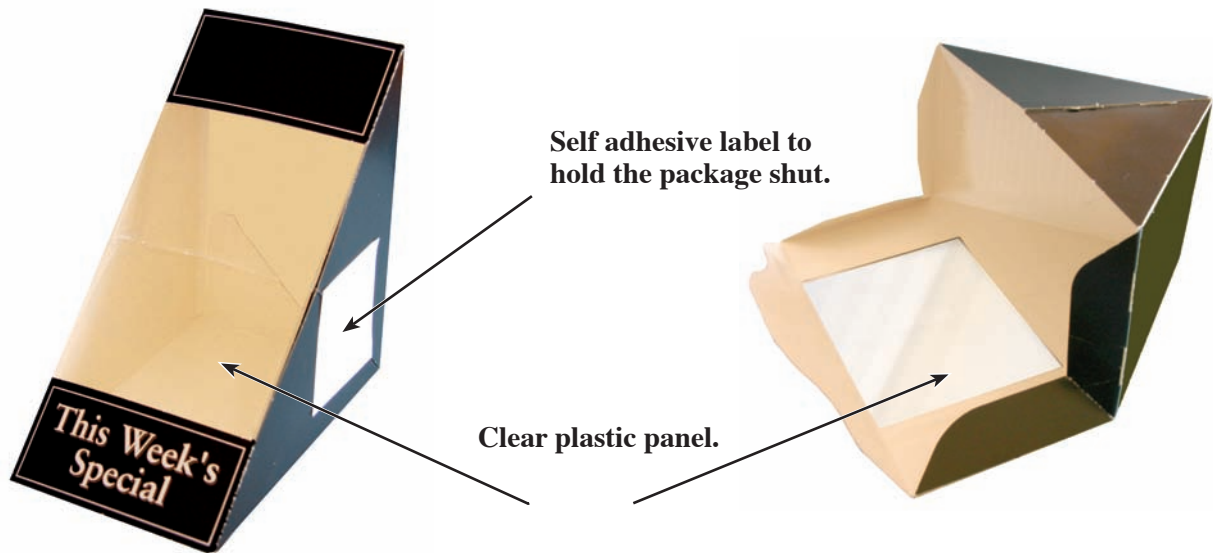
(c)



The full name of this piece of equipment is a ..... [3]

It is used to ..... [2]

2. **Study** the photographs below.  
 They show a prototype of a package for two sandwiches.  
 The package is made from folded card that has been printed.



- (a) A design specification is written before the package is designed.  
**State three** specification points about the function of the package. [6]

Point 1: .....

.....

Point 2: .....

.....

Point 3: .....

.....

- (b) The words “This Week’s Special” are to be printed using a *smart* material ink that will change colour according to the temperature of the package.

- (i) **Tick (✓)** the correct name for this type of ink: [1]

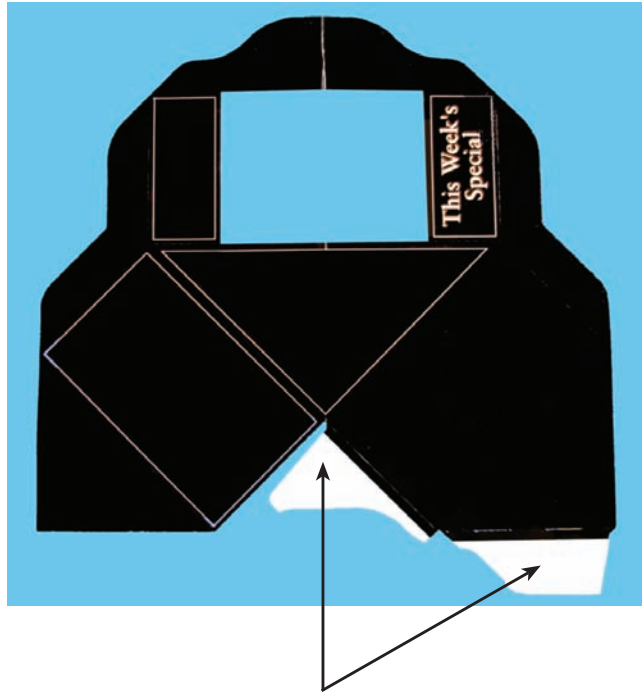
Photochromic Ink	<input type="checkbox"/>
Thermochromic Ink	<input type="checkbox"/>

- (ii) **Give one** reason why this could be useful to the customer. [2]

.....

.....

- (c) The photograph below shows the net of the sandwich package. Many packages are cut from one piece of card.  
Look at the white parts of the net.



**Parts that are used for fixing the net together.**

- (i) **State** the name of the parts that are used for fixing the net together. [2]

.....

- (ii) **Explain** why these parts of the net are so large. [3]

.....

.....

.....

- (iii) **State** the name of the process used to cut out the net. [1]

.....

- (iv) The white areas of the net seem to be a strange shape. **Explain** the reason for this. [2]

.....

.....

- (d) You decide to make five (5) exact copies of a prototype package to test them. The three main steps in making the packages are listed below. They are not in the correct order.

<b>CUT OUT</b>	<b>DRAW THE NET &amp; MAKE A TEMPLATE</b>	<b>SCORE, FOLD AND FIX TOGETHER</b>
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**Put** the steps in the correct order and **describe** how each step would be carried out.

Step 1: ..... [1]

Description: ..... [2]

.....

.....

.....

.....

Step 2: ..... [1]

Description: ..... [2]

.....

.....

.....

.....

Step 3: ..... [1]

Description: ..... [2]

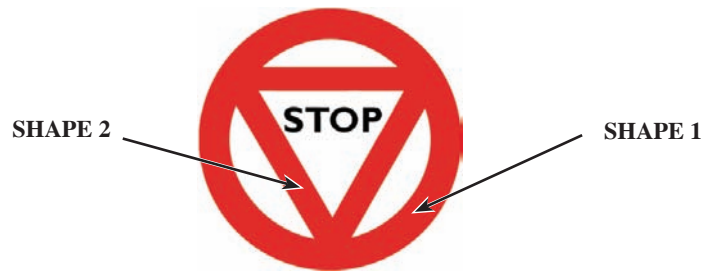
.....

.....

.....

.....

3. The drawing below shows the design for a sign.



(a) **State** the full name of the **two** geometric shapes used in the design.

Shape 1: .....

[1]

Shape 2: .....

[2]

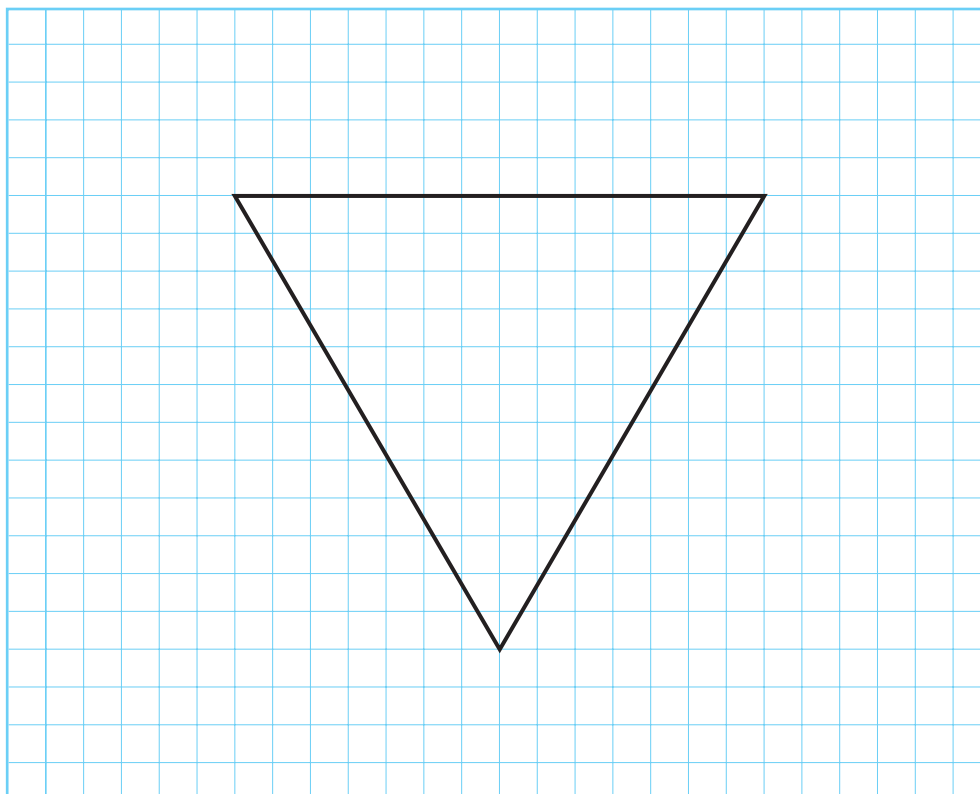
(b) **Tick (✓)** the name of the style of font used in the sign.

[1]

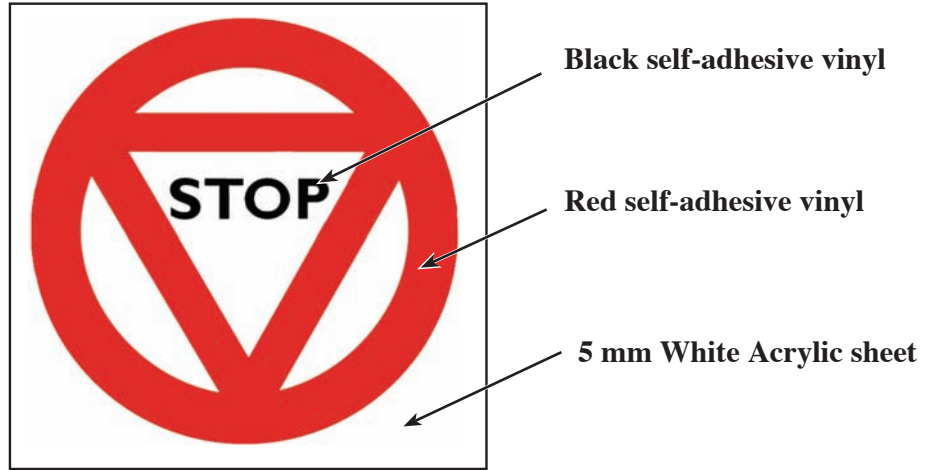
Old Style	<input type="checkbox"/>
Modern	<input type="checkbox"/>
Sans Serif	<input type="checkbox"/>

(c) In the space below finish the construction of the drawing.  
Show **all** parts of your construction. Assume any sizes not given.

[8]



- (d) It is decided to make the sign shown below by cutting self-adhesive vinyl using a CAM machine.



- (i) **Name** a suitable computer controlled machine that could be used to make the self-adhesive vinyl parts of the sign. [2]

.....

- (ii) Five steps in making the red part of the sign are listed below, but they are not in the correct order.  
**Write** down the correct order by numbering each stage. *Stage one has been done for you.* [4]

Remove unwanted vinyl using tweezers and cover with application tape	
Switch on the computer and load up the drawing of the red part of the sign	<b>1</b>
Load red self-adhesive vinyl into machine	
Run the machine to cut out the vinyl shapes	
Apply the cut out shapes to the acrylic sheet and remove the low tack application tape	

- (iii) **State one** advantage and **one** disadvantage of making signs using computer controlled machinery.

I ..... [2]

.....

.....

II ..... [2]

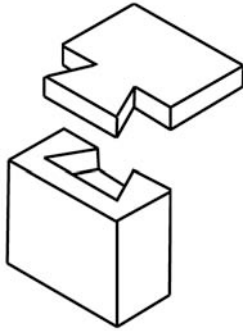
.....

.....

4. (a) There are several different methods of drawing. [4]  
Use the names in the list below to correctly label each method.

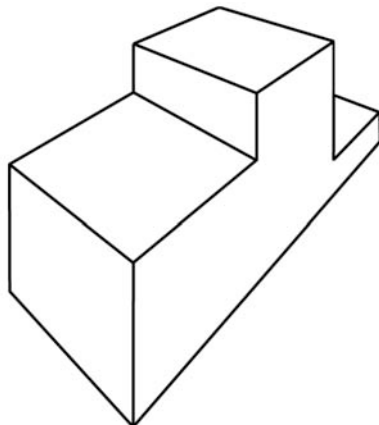
CUT AWAY	EXPLODED ISOMETRIC	ORTHOGRAPHIC	PERSPECTIVE
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(i)



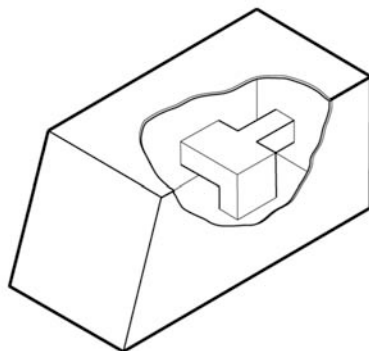
.....

(ii)



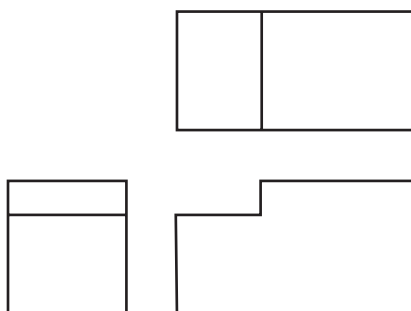
.....

(iii)



.....

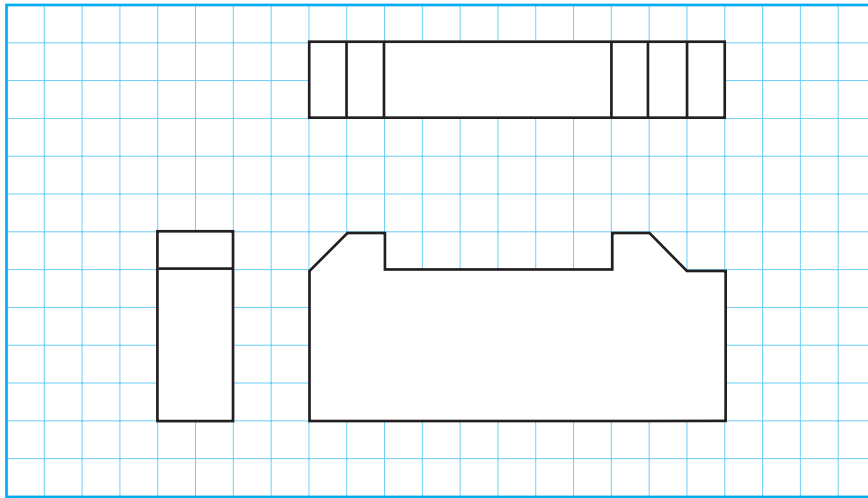
(iv)



.....



(b) Study the drawing shown below. It shows the outline of a key tag.



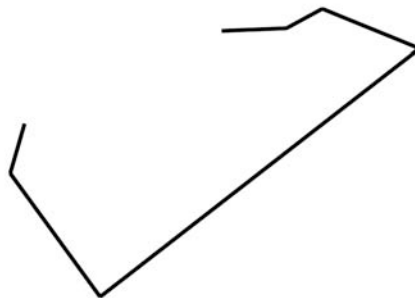
In the space provided make a **two point perspective** sketch of the key tag shown above. The drawing has been started for you with the horizon and part of the key tag.

**Marks will be awarded for:**

- drawing in the two vanishing points;
- completing the drawing of the key tag;
- quality of the linework;
- shading/ rendering.

[2]  
[3]  
[2]  
[3]

HORIZON



5. Helen Tilley, an estate agent, provides postcards with details of the houses that are for sale. Each postcard has a photograph of the house on the front of the card and details of the house are on the back.

The estate agent gives her customers five cards at a time and needs a folder made from folded card to hold the five postcards.



The postcards are 150mm by 100mm and are printed on 600 micron thick card.

Front of postcard



Back of postcard

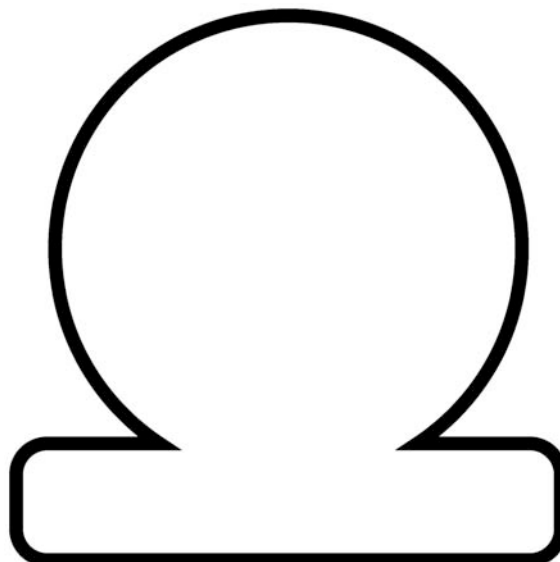


- (a) A stylish, imaginative logo is needed for the estate agent. In the shape drawn below, design a suitable logo and use the name **H Tilley**. The logo must fill the outline shape drawn below.

**Marks will be awarded for:**

- using the name **H Tilley** and all the space in the outline shape;
- designing a stylish, imaginative logo;
- quality of drawing;
- appropriate use of colour.

[1]  
[4]  
[2]  
[2]



- (b) **Design** a package that:
- holds five postcards securely;
  - is made from folded card;
  - allows the customer to see part of the photograph on the front of one of the postcards;
  - has space for the logo of the estate agent to be printed on it;
  - has space on the package to show the address and phone number of the estate agent.

**Marks will be awarded for:**

- showing how the folder holds FIVE postcards; [1]
- showing the space for the logo, address and phone number; [1]
- showing how part of the image on the top card can be seen; [2]
- showing how the card folder can be made; [3]
- the quality of the sketches and notes. [3]



- (c) **Make** an accurate drawing of the net of your design for the folder.  
**Show** both fold lines and cutting lines.  
You must add the **three** (3) most important dimensions to your drawing.

[6]

