

Tuesday 29 May 2012 – Afternoon

GCSE DESIGN AND TECHNOLOGY Graphics

A534/01 Technical Aspects of Designing and Making

Candidates answer on the Question Paper.

OCR supplied materials:

None

Other materials required:

None

Duration: 1 hour 15 minutes



Candidate forename		Candidate surname	
Centre number		Candidate number	

MODIFIED LANGUAGE

INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. HB pencil may be used for graphs and diagrams only.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer to each question in the space provided. Additional paper may be used if necessary but you must clearly show your candidate number, centre number and question number(s).
- Answer **all** the questions in **Section A** and **Section B**.
- Do **not** write in the bar codes.

INFORMATION FOR CANDIDATES

- The number of marks is given in brackets [] at the end of each question or part question.
- The total number of marks for this paper is **60**.
- Your Quality of Written Communication will be assessed in questions marked with an asterisk (*).
- This document consists of **12** pages. Any blank pages are indicated.

Section A

Answer **all** questions.

- 1 Fig. 1 shows a fruit tray.

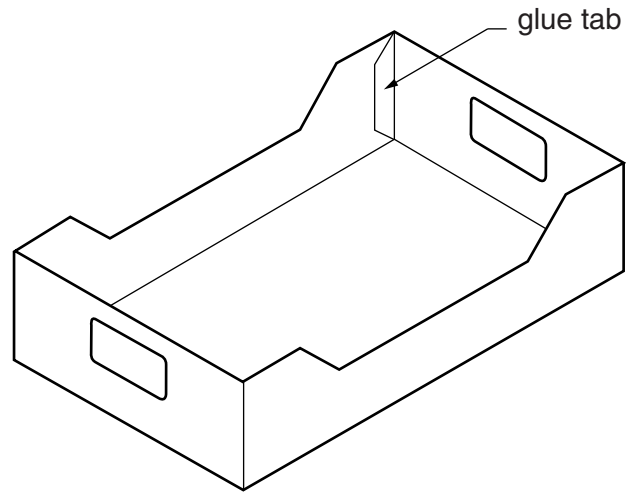
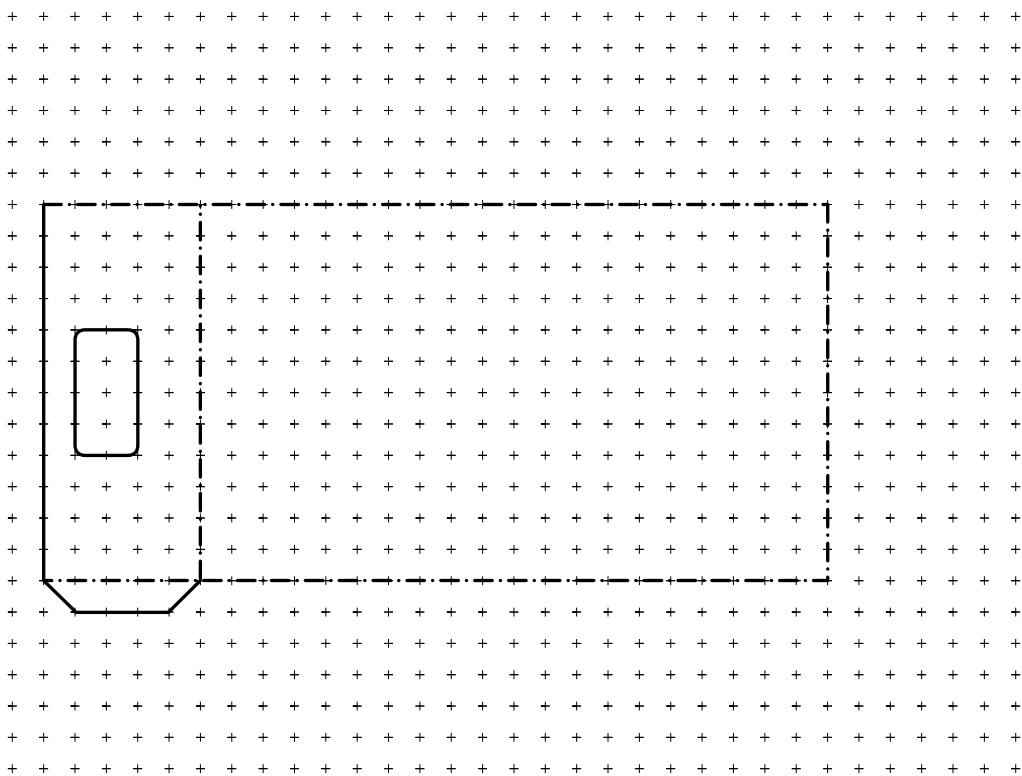


Fig. 1

- (a) Complete the sketch to show the development (net) of the fruit tray.



[4]

- (b) The fruit tray is made from corrugated card.

In the space sketch a sectional view of corrugated card.

[2]

- (c) Corrugated card has physical and aesthetic properties that make it suitable for a fruit tray. State **one** physical property and **one** aesthetic property of corrugated card.

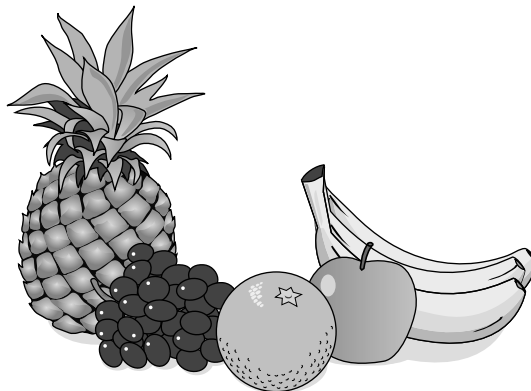
Physical property

..... [1]

Aesthetic property.....

..... [1]

- (d) This image is to be printed on the fruit tray in colour using the CMYK colour process.



- (i) State what the letters **CMYK** stand for:

C **M** **Y** **K** [2]

- (ii) Explain how the CMYK colour process is used to get the colours needed in the design.

.....

 [2]

[Total: 12]

2 Orthographic views of a prototype point of sale display stand are shown in Fig. 2.

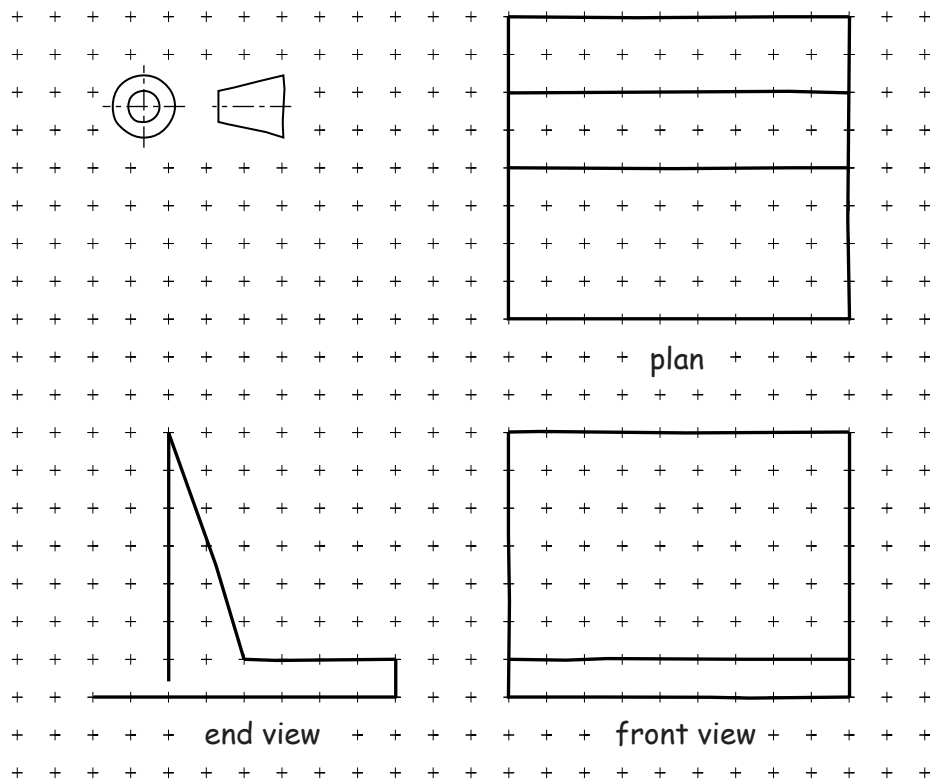


Fig. 2

(a) Complete the isometric sketch of the point of sale display on the grid in Fig. 3.

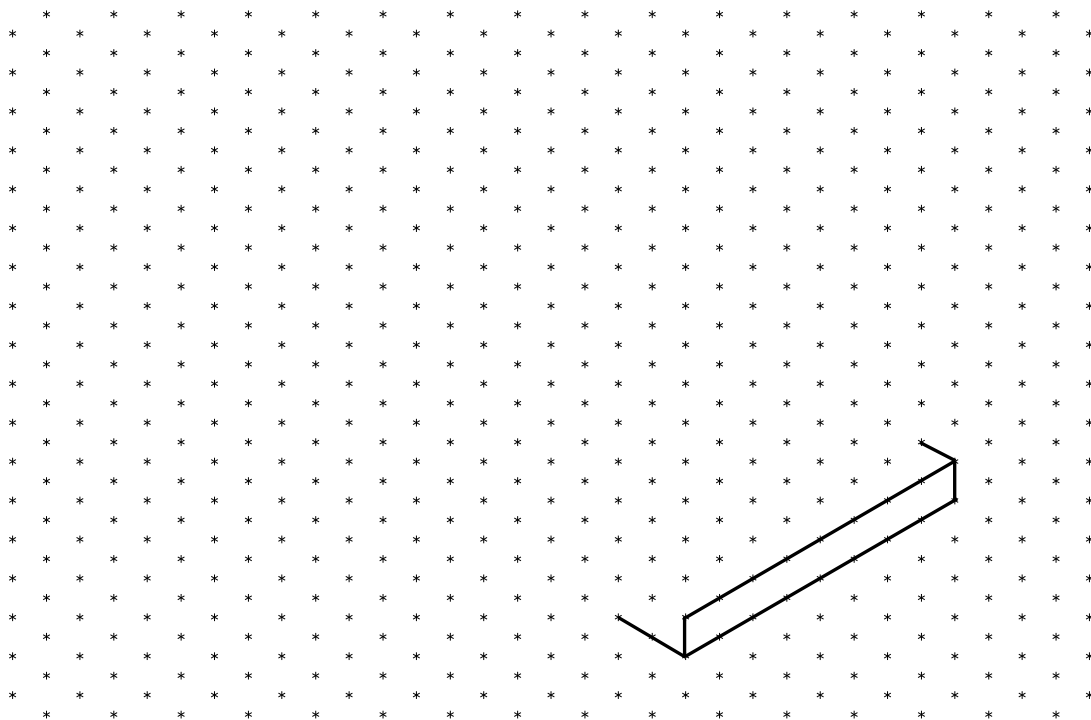


Fig. 3

[4]

(i) Name a suitable thermoplastic sheet for the point of sale display.

..... [1]

(ii) Name the item of equipment that would be used to heat the plastic sheet so that it can be folded.

..... [1]

(c)* A manufacturer is planning to produce a quantity of the display stands.

Discuss the issues the manufacturer would need to consider when producing a quantity of display stands.

[6]

[Total: 12]

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- 3 Fig. 4 shows a teaching aid to help children tell the time.

The teaching aid is made from 4 mm thick Corriflute.

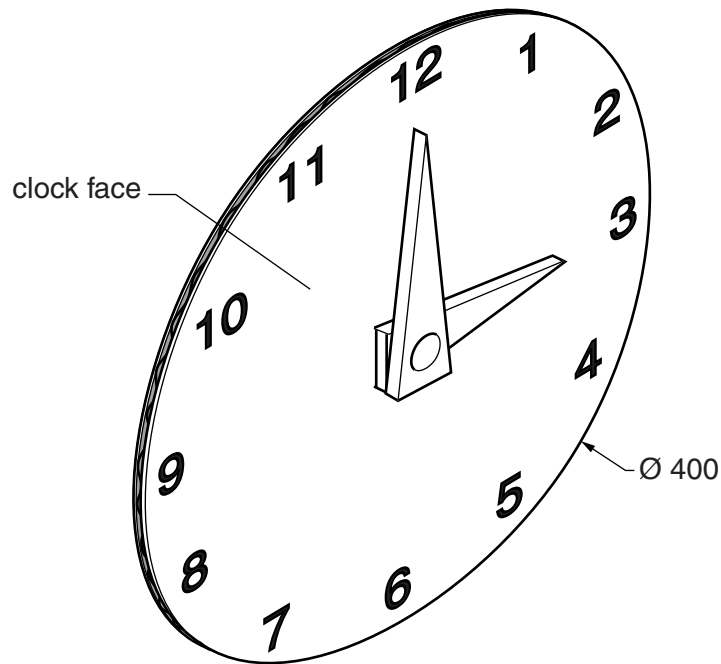


Fig. 4

- (a) State a suitable length for the hour hand and the minute hand on the clock.

Minute hand Hour hand [2]

- (b) Sketch a method of fixing the clock hands to the clock face that will allow the hands to move round.

[2]

- (c) The numbers on the clock face are made from self adhesive vinyl.

Explain how CAD/CAM could be used to produce the numbers.

.....

.....

.....

.....

.....

.....

.....

..... [4]

- (d) State **one** advantage and **one** disadvantage of using Corriflute for the teaching aid.

Advantage.....

.....

Disadvantage.....

..... [2]

- (e) A further teaching aid is required to explain nanotechnology.

- (i) Tick (✓) the best 'key word' that describes nanotechnology.

smaller	bigger	heavier
---------	--------	---------

[1]

- (ii) State **one** use of nanotechnology.

.....

..... [1]

[Total: 12]

Section B

Answer **all** questions.

- 4 Fig. 5 shows a DVD. The DVD is an educational film about outer space. The DVD is aimed at young children.

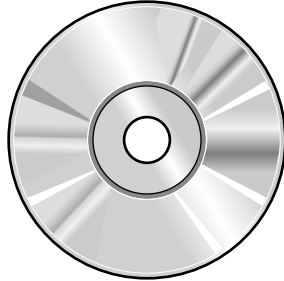


Fig. 5

- (a) Use sketches and notes to show how the DVD could be packaged.

Specification points for the package are that it must:

- be made from card
- form a star shape when opened
- close securely
- clearly show the word '*SPACE*' on it.

- (b) The DVD package is to be produced in black card with silver lettering.

State a suitable printing process to print the letters in silver.

..... [1]

- (c) State **one** other finishing process that could be used to make the lettering stand out on the package.

..... [1]

- (d) Three font styles for the word 'SPACE' are shown.

- (i) Tick the font style most suitable for the DVD lettering.

SPACE	SPACE	SPACE
-------	-------	-------

[1]

- (ii) Give **one** reason for your choice of font style.

.....
 [1]

- (e) Fig. 6 shows the logo to be applied to the DVD package.

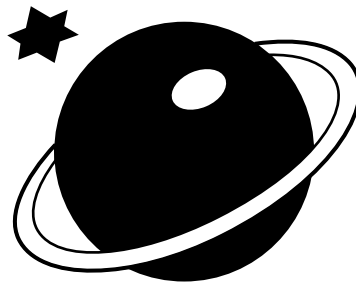


Fig. 6

Explain how the manufacturer of the DVD can make sure the logo is not used or reproduced by other companies.

.....

 [2]

[Total: 12]

5 Fig. 7 shows a washing powder box made from cardboard.

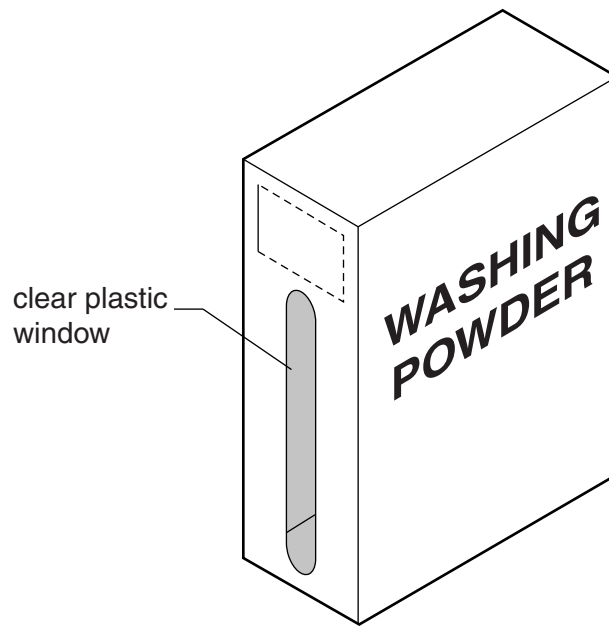


Fig. 7

(a) State **two** pieces of information that should be on the box.

- 1
- 2..... [2]

(b) State the purpose of the clear plastic window on the side of the box.

-
- [1]

(c) State a suitable adhesive for fixing the clear plastic window to the box.

- [1]

(d) Explain how the use of two materials for the box will affect the recycling process.

-
-
- [2]

[6]

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