



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS  
International General Certificate of Secondary Education

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**DESIGN AND TECHNOLOGY**

0445/01

Paper 1 Design

May/June 2008

1 hour 15 minutes

Candidates answer on the pre-printed A3 Answer Sheets.

Additional Materials:      Standard drawing equipment  
   A3 pre-printed Answer Sheets (2)

**To be taken together with the optional paper for which you have been entered in one session of 2 hours and 15 minutes.**

**READ THESE INSTRUCTIONS FIRST**

Write your Centre number, candidate number and name in the spaces on **both** printed Answer Sheets.  
Write in dark blue or black pen.  
You may use a soft pencil for any diagrams, graphs or rough working.  
Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer **one** question.  
Write/draw your answers in the spaces provided on the Answer Sheets.  
You may use a calculator.

At the end of the examination, fasten all your work securely together.  
The number of marks is given in brackets [ ] at the end of each question or part question.

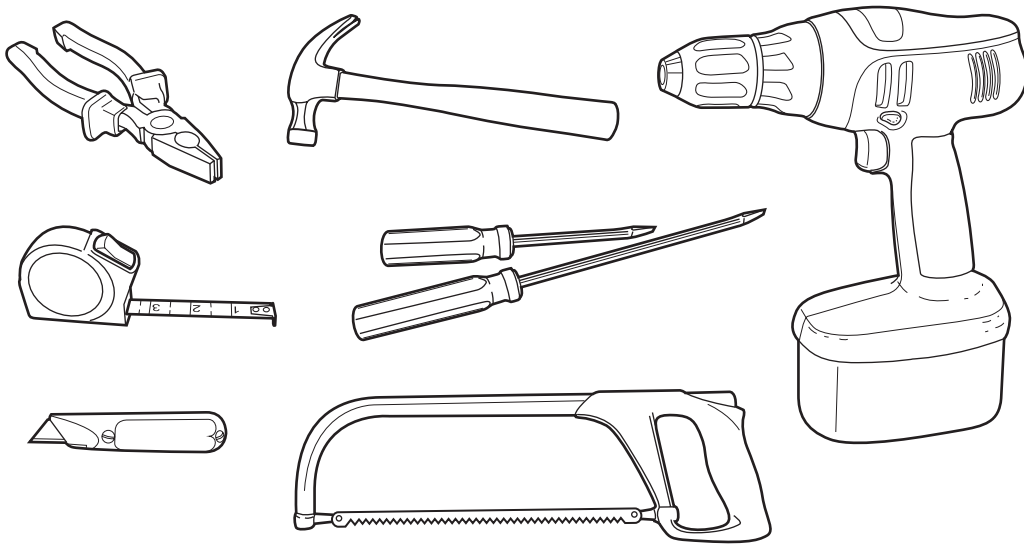
This document consists of 4 printed A4 pages.



\* 4 4 9 5 5 6 3 0 5 2 \*

Answer **one** question only on the A3 pre-printed answer sheets provided.

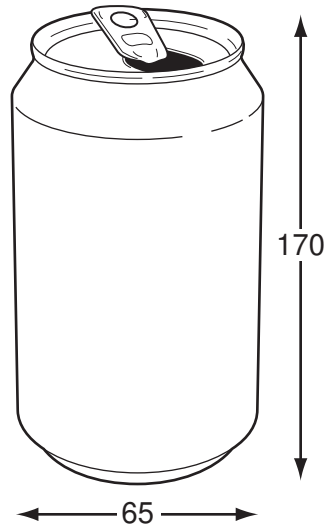
- 1 Many people do simple repair work in the home for which a small range of tools is required.



A device to store and carry the tools shown above would be very helpful.

- (a) List **four** additional points about the function of such a device that you consider to be important. [4]
- (b) Draw **two** ways in which handles could be included on carrying devices. [4]
- (c) Develop and sketch ideas for the storage and carrying device. [12]
- (d) Evaluate your ideas and justify why you have chosen **one** idea to develop more fully. [8]
- (e) Draw, using a method of your own choice, a full solution to your problem. Include construction details and major dimensions. [12]
- (f) Suggest suitable materials for your solution and give reasons for your choice. [4]
- (g) Outline a method used to manufacture **one** part of your solution in the school workshop. [6]

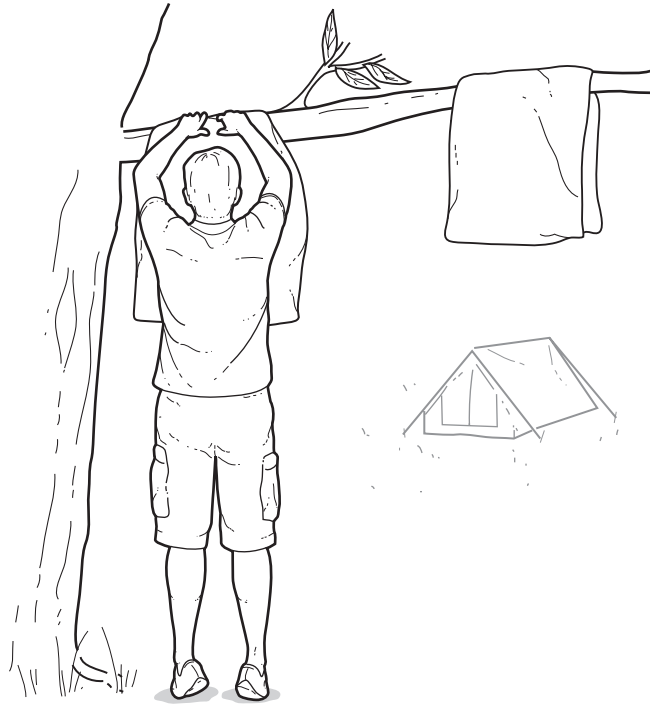
- 2 Students are being encouraged to recycle drinks cans whenever possible.



You have been asked to design a lightweight folding collection unit, to be distributed to all schools, that would encourage students to recycle their cans.

- (a) List **four** additional points about the function of such a unit that you consider to be important. [4]
- (b) Use sketches and notes to show **two** methods by which flexible joints can be used on card products. [4]
- (c) Develop and sketch ideas for the recycling unit. [12]
- (d) Evaluate your ideas and justify why you have chosen **one** idea to develop more fully. [8]
- (e) Draw, using a method of your own choice, a full solution to your problem. Include construction details and major dimensions. [12]
- (f) Suggest suitable materials for your solution and give reasons for your choice. [4]
- (g) Outline the method of producing a prototype of the recycling unit in the school graphics studio. [6]

- 3 It is often difficult to find somewhere to hang out washing when camping.



Design a portable free-standing clothes-drying device that could be used when camping.

- (a) List **four** additional points about the function of such a drying device that you consider to be important. [4]
- (b) Draw any **two** temporary joining methods for wood, plastic or metal. [4]
- (c) Develop and sketch ideas for the drying device. [12]
- (d) Evaluate your ideas and justify why you have chosen **one** idea to develop more fully. [8]
- (e) Draw, using a method of your own choice, a full solution to your problem. Include construction details and major dimensions. [12]
- (f) Suggest suitable materials for your solution and give reasons for your choice. [4]
- (g) Outline a method used to manufacture **one** part of your solution in the school workshop. [6]