



Cambridge IGCSE™

DESIGN & TECHNOLOGY

0445/11

Paper 1 Product Design

October/November 2025

1 hour 15 minutes



You must answer on the two pre-printed A3 answer sheets.

You will need: Two A3 pre-printed answer sheets (enclosed)
Standard drawing equipment
Coloured pencils

INSTRUCTIONS

- Answer **one** question.
- Use an HB pencil for any drawings and a black or dark blue pen for any writing.
- Write your name, centre number and candidate number in the space on **both** pre-printed answer sheets.
- Answer in the space provided on the answer sheets.
- Do **not** use an erasable pen, staples, paper clips, glue or correction fluid.
- Do **not** write on any bar codes.
- You may use a calculator.
- You may use standard drawing equipment, including coloured pencils.
- At the end of the examination, hand in your named A3 answer sheets. Do **not** fasten them together and do **not** punch holes in the sheets or tie with string.

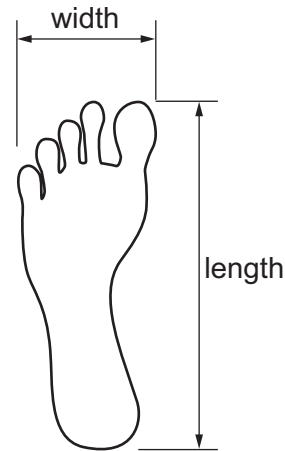
INFORMATION

- The total mark for this paper is 50.
- The number of marks for each question or part question is shown in brackets [].
- All dimensions are in millimetres unless otherwise stated.

This document has 4 pages.

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

- 1 Children need to get their feet measured before buying new shoes.



Design a device which can allow workers in a shoe shop to measure the width and length of different children's feet. The device should appeal to children and allow the child to be seated whilst having their feet measured.

- (a) List **four** additional points about the function of such a device that you consider to be important. [4]
- (b) Use sketches and notes to show **two** methods of measuring different sized and shaped objects. [4]
- (c) Develop and sketch **three** separate ideas for the measuring device. [12]
- (d) Evaluate your three ideas. Choose **one** idea to develop further and justify your choice. [8]
- (e) Draw, using a method of your own choice, a full solution to the design problem. Include construction details and important dimensions. [12]
- (f) Suggest **two** suitable specific materials for the solution you have drawn in part (e) and give reasons for your choice. [4]
- (g) Outline a method that could be used to manufacture **one** part of your solution drawn in part (e). Include the names of the tools used. [6]

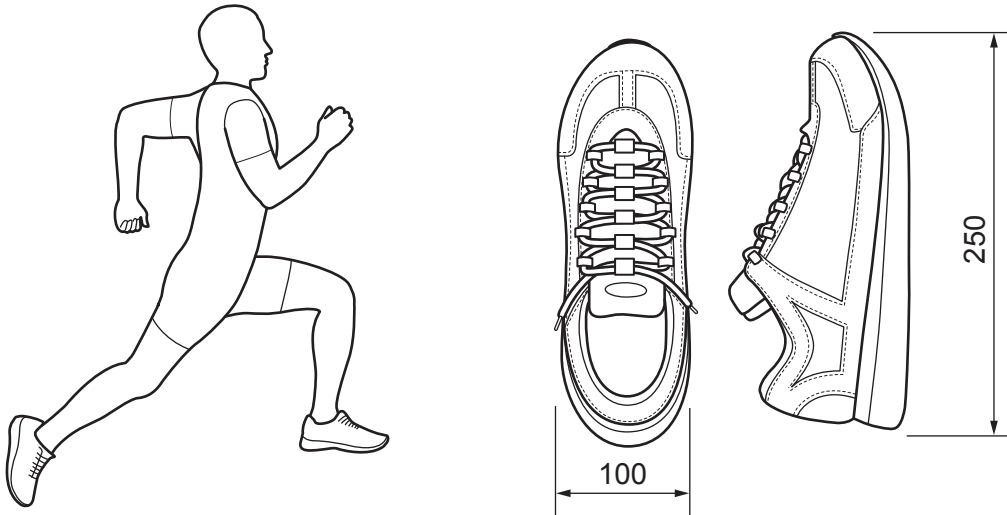
2 Different types of footwear are often displayed in shop windows.



Design a shop window display stand which will hold **three** different types of footwear. The display stand should fold flat for storage and be made from lightweight graphic materials.

- (a) List **four** additional points about the function of such a footwear display stand that you consider to be important. [4]
- (b) Use sketches and notes to show **two** methods of creating a rigid structure from lightweight graphic materials. [4]
- (c) Develop and sketch **three** separate ideas for the footwear display stand. [12]
- (d) Evaluate your three ideas. Choose **one** idea to develop further and justify your choice. [8]
- (e) Draw, using a method of your own choice, a full solution to the design problem. Include construction details and important dimensions. [12]
- (f) Suggest **two** suitable specific materials for the solution you have drawn in part (e) and give reasons for your choice. [4]
- (g) Outline a method that could be used to manufacture **one** part of your solution drawn in part (e). Include the names of the tools used. [6]

3 Running shoes need to be tested for durability by the manufacturer before being sold.



Design a device which can test the durability of a running shoe. The device should simulate someone running in the shoe for a period of 10 hours.

- (a) List **four** additional points about the function of such a testing device that you consider to be important. [4]
- (b) Use sketches and notes to show **two** mechanisms that use rotary or reciprocating motion. [4]
- (c) Develop and sketch **three** separate ideas for the running shoe testing device. [12]
- (d) Evaluate your three ideas. Choose **one** idea to develop further and justify your choice. [8]
- (e) Draw, using a method of your own choice, a full solution to the design problem. Include construction details and important dimensions. [12]
- (f) Suggest **two** suitable specific materials for the solution you have drawn in part (e) and give reasons for your choice. [4]
- (g) Outline a method that could be used to manufacture **one** part of your solution drawn in part (e). Include the names of the tools used. [6]

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge Assessment International Education Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cambridgeinternational.org after the live examination series.

Cambridge Assessment International Education is part of Cambridge Assessment. Cambridge Assessment is the brand name of the University of Cambridge Local Examinations Syndicate (UCLES), which is a department of the University of Cambridge.