

| | | | |
|--------------------|--|-------------------|--|
| Candidate Forename | | Candidate Surname | |
|--------------------|--|-------------------|--|

| | | | | | | | | | | |
|---------------|--|--|--|--|--|------------------|--|--|--|--|
| Centre Number | | | | | | Candidate Number | | | | |
|---------------|--|--|--|--|--|------------------|--|--|--|--|

**OXFORD CAMBRIDGE AND RSA EXAMINATIONS
GENERAL CERTIFICATE OF SECONDARY EDUCATION**

B271B

**MATHEMATICS C
(GRADUATED ASSESSMENT)**

MODULE M1 – SECTION B

TUESDAY 23 JUNE 2009: Morning

DURATION: 30 minutes

SUITABLE FOR VISUALLY IMPAIRED CANDIDATES

Candidates answer on the question paper

OCR SUPPLIED MATERIALS:

None

OTHER MATERIALS REQUIRED:

Geometrical instruments

Tracing paper (optional)

Electronic calculator

READ INSTRUCTIONS OVERLEAF

INSTRUCTIONS TO CANDIDATES

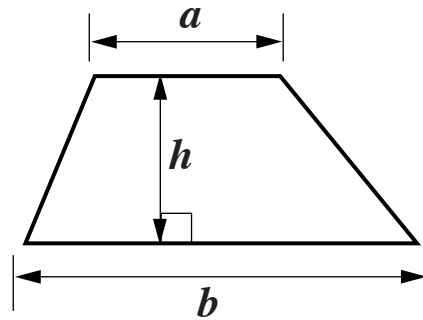
- **Write your name clearly in capital letters, your Centre Number and Candidate Number in the boxes on the first page.**
- **Use black ink. Pencil may be used for graphs and diagrams only.**
- **Read each question carefully and make sure that you know what you have to do before starting your answer.**
- **Show your working. Marks may be given for a correct method even if the answer is incorrect.**
- **Answer ALL the questions.**
- **Write your answer to each question in the space provided, however additional paper may be used if necessary.**

INFORMATION FOR CANDIDATES

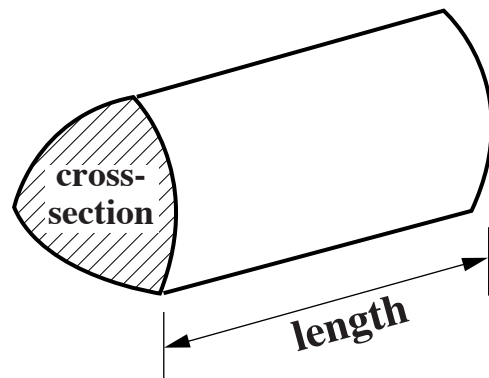
- **The number of marks is given in brackets [] at the end of each question or part question.**
- **Section B starts with question 6.**
- **You are expected to use a calculator in Section B of this paper.**
- **The total number of marks for this Section is 25.**

FORMULAE SHEET

Area of trapezium = $\frac{1}{2}(a + b)h$

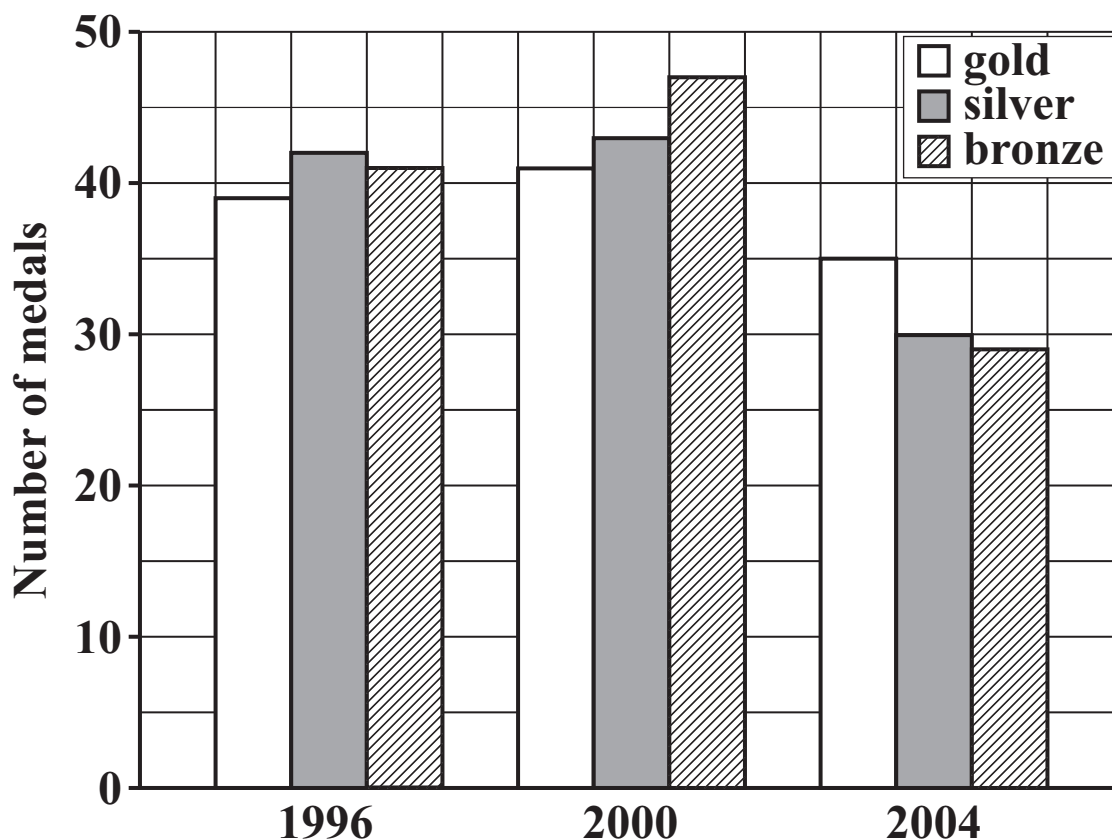


Volume of prism =
(area of cross-section) \times length



PLEASE DO NOT WRITE ON THIS PAGE

- 6 This bar chart shows the numbers of gold, silver and bronze medals won by the UK in the 1996, 2000 and 2004 paralympics.

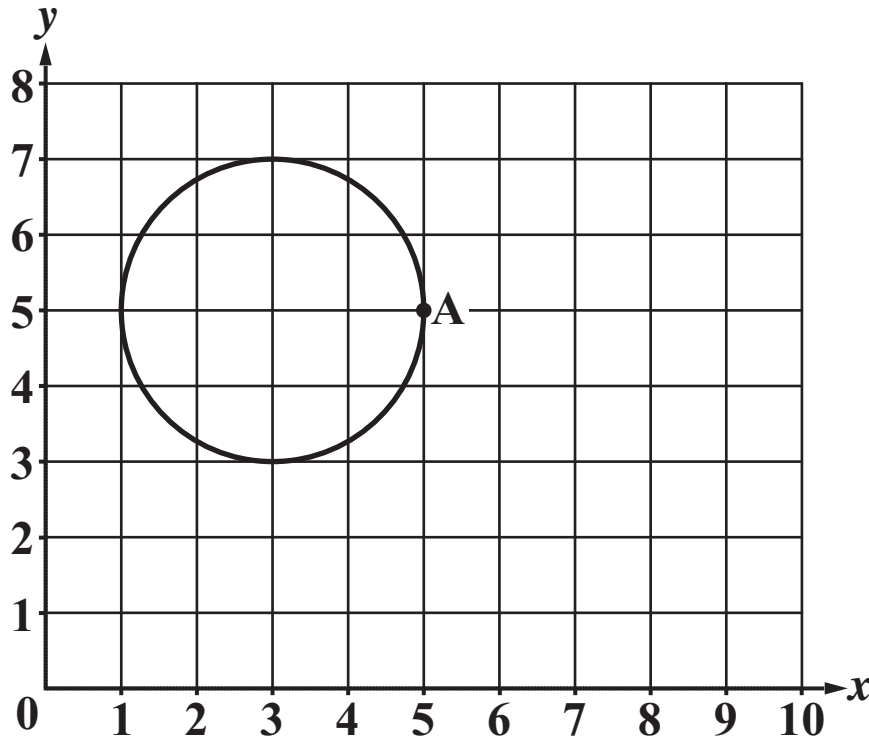


Use the bar chart to complete these sentences.

- (a) In 1996 _____ gold medals were won.
[1 mark]
- (b) The most silver medals were won in the year _____ .
[1 mark]
- (c) In 2004 the TOTAL number of medals won (gold, silver and bronze) was _____ .
[1 mark]

BLANK PAGE

7 This is a circle drawn on a grid.



(a) Write down the coordinates of the point A.
[1 mark]

(a) (_____ , _____)

(b) Jade says: “The centre of the circle is at point (5, 3).”

Is Jade right or wrong?
Complete these sentences.

Jade is _____ .

The coordinates of the centre of the circle are

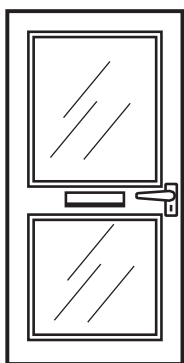
(_____ , _____).

[1 mark]

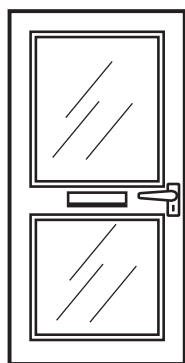
- (c) Measure the diameter of the circle.
Give the units of your answer.
[2 marks]**

(c) _____

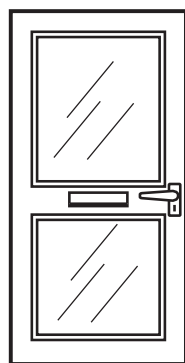
8 Josh and Lee live in a tower block.



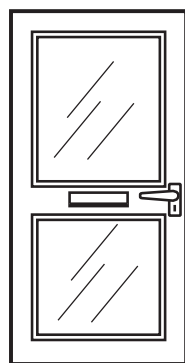
16



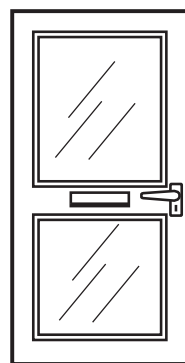
17



18

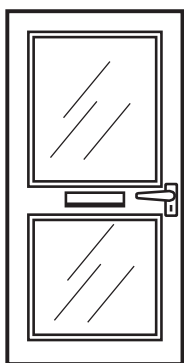


19

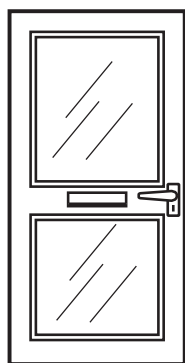


20

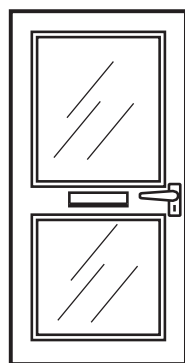
LIFT



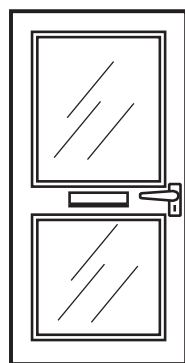
11



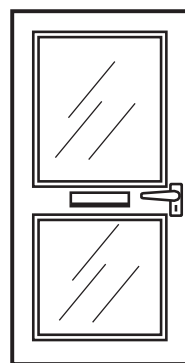
12



13

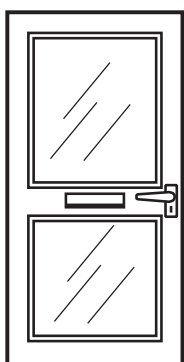


14

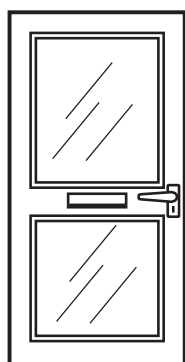


15

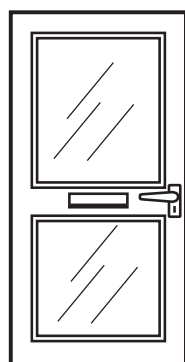
LIFT



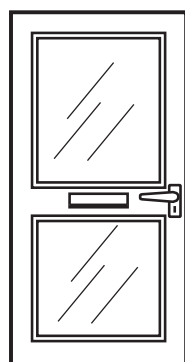
6



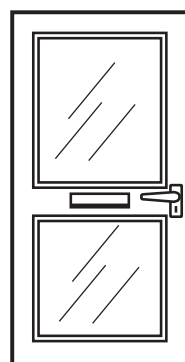
7



8



9



10

LIFT

- (a) Josh lives in flat 16.**
- Lee lives on the next floor.**
- His flat is directly above Josh's flat.**

What number is Lee's flat?
[1 mark]

(a) _____

(b) Josh's nan lives in the same tower block.

She lives at flat 45.

Lee says: "Your Nan must live next door to the lift. You can tell from her flat number."

Explain how Lee worked out that flat 45 must be next to the lift by using the flat number.

[2 marks]

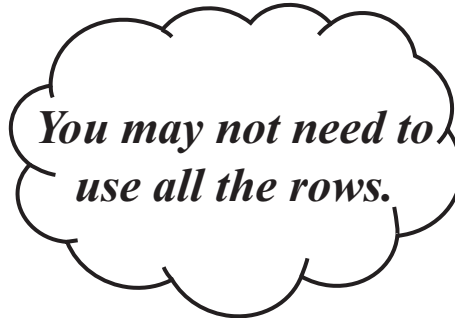
9 Some students are listing all the different 3-digit numbers they can make from these number cards.



Complete their list.

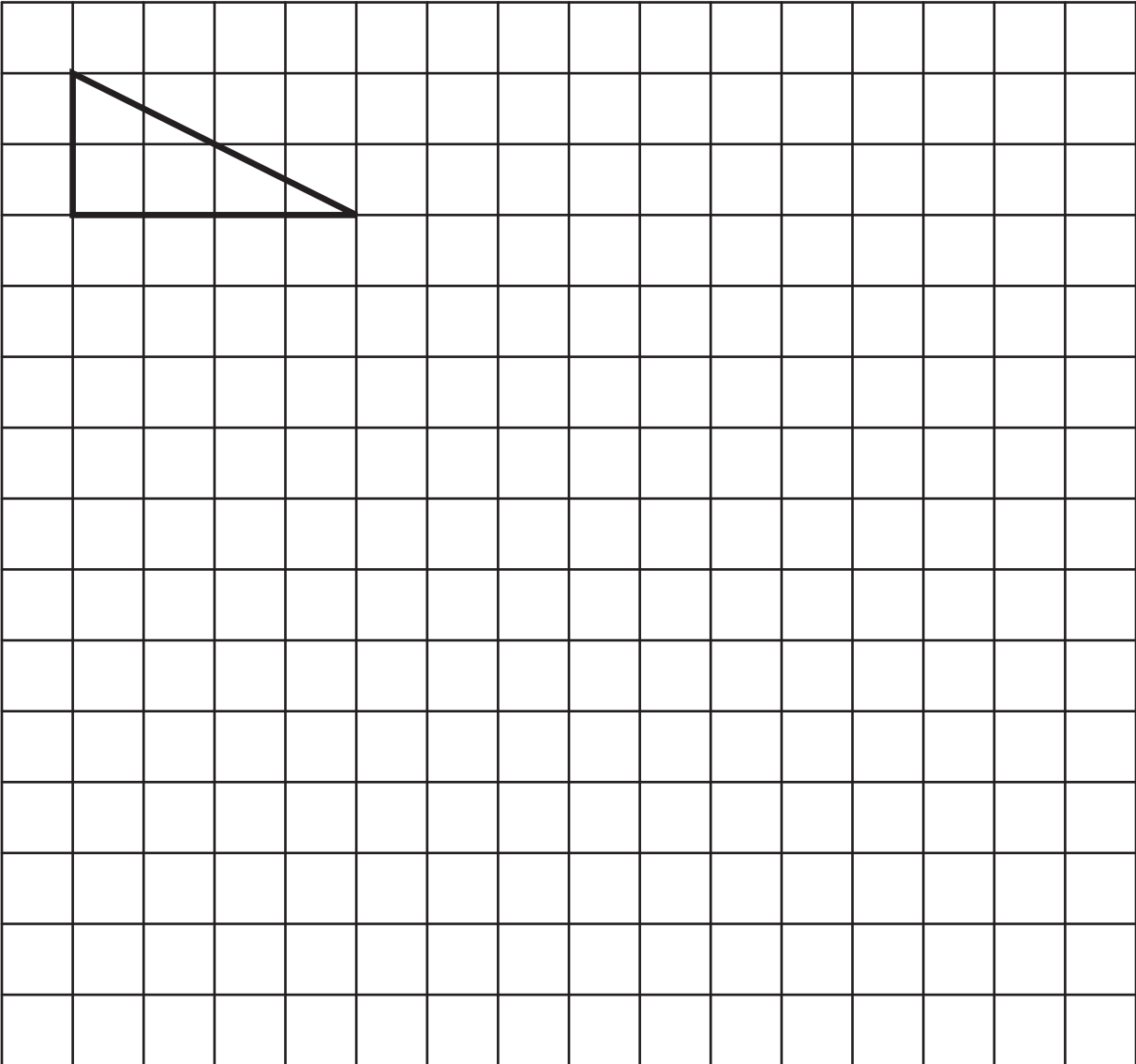
Two have already been done for you.

| | | |
|---|---|---|
| 1 | 2 | 3 |
| 1 | 3 | 2 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |



[2 marks]

**10 Draw an enlargement of this shape.
Make each line twice as long.**



[2 marks]

**11 (a) Write down any odd number which is divisible by 5.
[1 mark]**

(a) _____

**(b) Write down any even number which is divisible by 5.
[1 mark]**

(b) _____

12 Complete these calculations.

(a) **$6 + \square = 20$**

[1 mark]

(b) **$\square \times 3 = 18$**

[1 mark]

13 Amy has some black marbles and some white marbles. She puts either one or two marbles underneath each of four plastic cups.



Bala picks one of the cups without looking.

Match each outcome with the correct probability word. One has been done for you.

| | |
|----------------------------|------------|
| Two marbles | Certain |
| At least one marble | Evens |
| A black and a white marble | Likely |
| Five marbles | Unlikely |
| One marble | Impossible |

A line connects the box containing "Five marbles" to the box containing "Impossible".

[4 marks]

**14 Misha wants to buy a pair of sunglasses.
She cannot decide which pair to buy.
She has the choice of the following:**

| | |
|---------------|---------------|
| Type A | £28.80 |
| Type B | £21.75 |
| Type C | £19.99 |
| Type D | £11.99 |
| Type E | £13.75 |
| Type F | £24.45 |

**How much would she save by buying the cheapest rather than the most expensive sunglasses?
[3 marks]**

£ _____



Copyright Information

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations, is given to all schools that receive assessment material and is freely available to download from our public website (www.ocr.org.uk) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact the Copyright Team, First Floor, 9 Hills Road, Cambridge CB2 1PB.

OCR is part of the Cambridge Assessment Group; Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.