OCR
RECOGNISING ACHIEVEMENT

GENERAL CERTIFICATE OF SECONDARY EDUCATION
MATHEMATICS C (GRADUATED ASSESSMENT)

M3 B243A

MODULE M3 – SECTION A

TUESDAY 13 MARCH 2007 Morning

Time: 30 minutes

Candidates answer on the question paper.
Additional materials: Geometrical instruments
Tracing paper (optional)

CUP/T34587

Candidate Name

Centre Number

Candidate Number

INSTRUCTIONS TO CANDIDATES

- Write your name, Centre Number and Candidate Number in the boxes above.
- Answer **all** the questions.
- Use blue or black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure you know what you have to do before starting your answer.
- In many questions marks will be given for a correct method even if the answer is incorrect.
- Do **not** write in the bar code.
- Do **not** write outside the box bordering each page.
- WRITE YOUR ANSWER TO EACH QUESTION IN THE SPACE PROVIDED. ANSWERS WRITTEN ELSEWHERE WILL NOT BE MARKED.

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 Section is 25.

WARNING
You are not allowed to use a calculator in Section A of this paper.

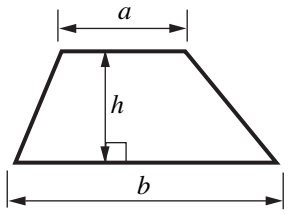
For Examiner's Use	
Section A	
Section B	
Total	

This document consists of **8** printed pages.

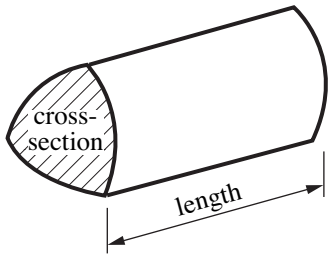
[Turn over

Formulae Sheet

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



Volume of prism = (area of cross-section) × length



PLEASE DO NOT WRITE ON THIS PAGE

1 Work out.

(a) 28×100

(a)..... [1]

(b) $1{\cdot}6 \times 2$

(b) ..... [1]

(c) $6{\cdot}5 \div 5$

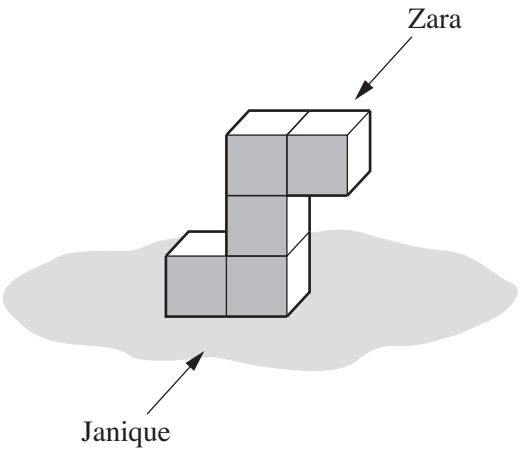
(c)..... [1]

(d) $\frac{3}{4}$ of 20

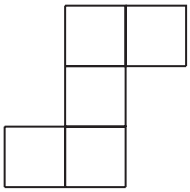
(d) ..... [2]

5

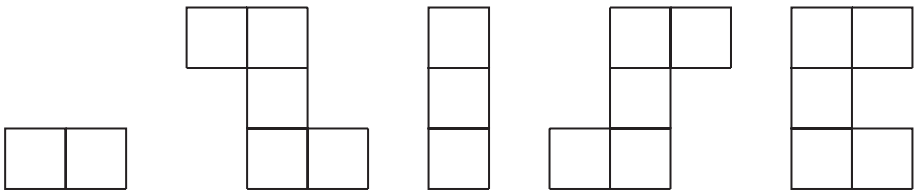
2 **(a)** Janique makes a shape with 5 cubes.
She puts it on the table between her and Zara.



This is the view that Janique sees.



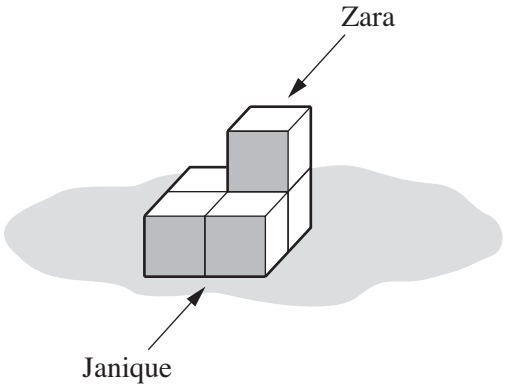
Put a tick (✓) under the view that Zara sees.



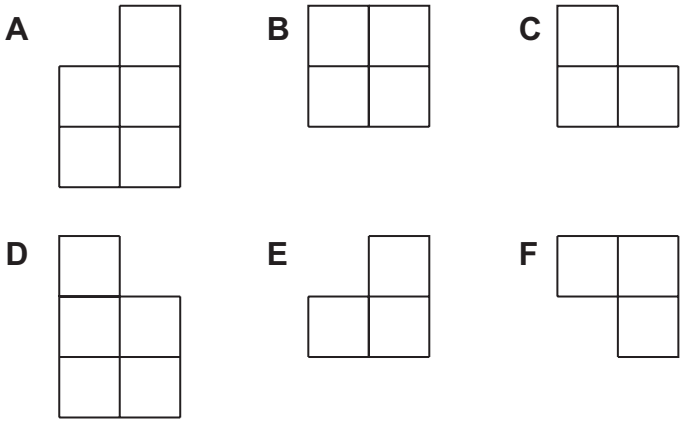
....

[1]

(b) Janique now makes this shape with 5 cubes.



Here are some views of shapes.



Complete these sentences.

Janique sees view ..... .

Zara sees view ..... . [2]

3

3 Sam earns £6 per hour.
One week he works for 35 hours.

He saves 20% of his total earnings for the week.

How much money does he save?
You must show your working.

£ ..... [4]

4

4 **(a)** Chris enters a sponsored run.
He runs 10 km.

Complete his sponsor form for the race.

Sponsored 10 km run		
Name	**Amount per kilometre**	**Total**
John	£1·00	£10·00
Hendrika	60p	.....
Nancy	£1·25	.....
Dan	.....	£1·50

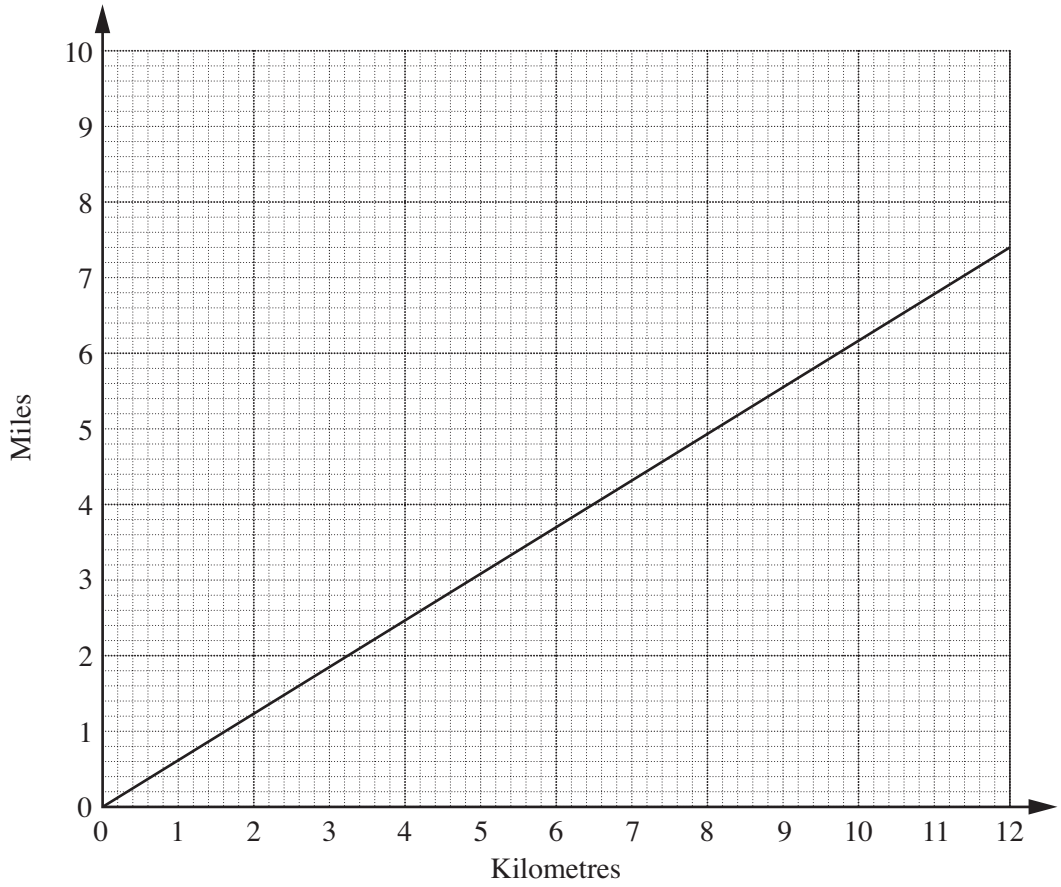
[3]

(b) The entrance fee for the race is £15.
$\frac{2}{5}$ of the entrance fee goes to charity.

Work out $\frac{2}{5}$ of £15.

(b) £ ..... [2]

(c) This graph can be used to convert between kilometres and miles.



(i) Chris runs 10 km.

How far is this in miles?

(c)(i) ..... miles [1]

(ii) The junior race is 3 miles long.

How far is this in kilometres?

(ii) ..... km [1]

7

5 **(a)** Ross has a conservatory of length 5 metres and width 3 metres.

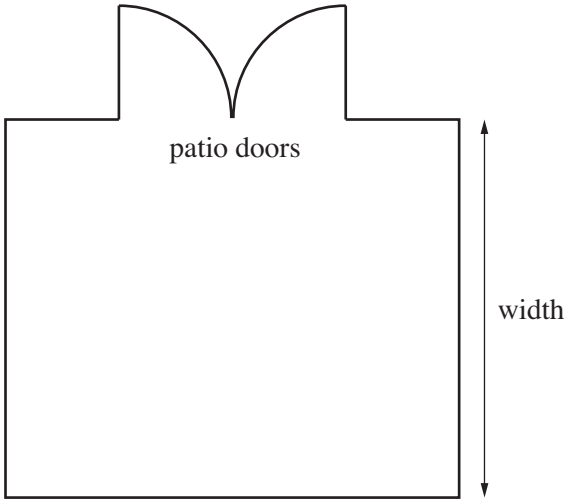
He uses this rule to work out the number of floor tiles he needs.

> Multiply the length in metres by the width in metres
> then multiply by 4

How many floor tiles does Ross need?

(a)..... [2]

(b) This is a plan view of Kate's conservatory.

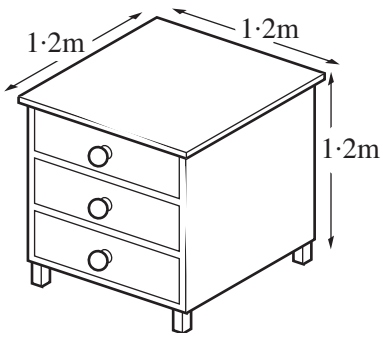


Scale:
2 cm to 1 m

(i) Find the real width of the conservatory.

(b)(i)..... m [2]

(ii) Kate has a cupboard with sides 1·2 metres.



Will it fit through the patio doors?
Explain your answer.

..... because .....

..... [2]

6