



M4

**GENERAL CERTIFICATE OF SECONDARY EDUCATION
MATHEMATICS C (GRADUATED ASSESSMENT)
MODULE M4 (SECTION A)**

B274A



Candidates answer on the question paper.

OCR supplied materials:
None

Other materials required:

- Geometrical instruments
- Tracing paper (optional)

**Tuesday 21 June 2011
Afternoon**

Duration: 30 minutes



Candidate forename		Candidate surname	
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Centre number							Candidate number				
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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. 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.
- Show your working. Marks may be given for a correct method even if the answer is incorrect.
- 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.
- Do **not** write in the bar codes.

INFORMATION FOR CANDIDATES

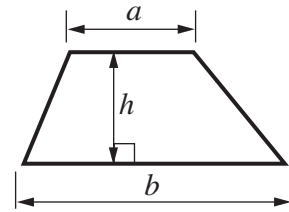
- The number of marks is given in brackets [] at the end of each question or part question.
- The total number of marks for this Section is **25**.
- This document consists of **8** pages. Any blank pages are indicated.

WARNING

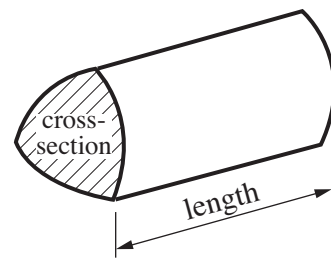
No calculator can be used for Section A of this paper

Formulae Sheet

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

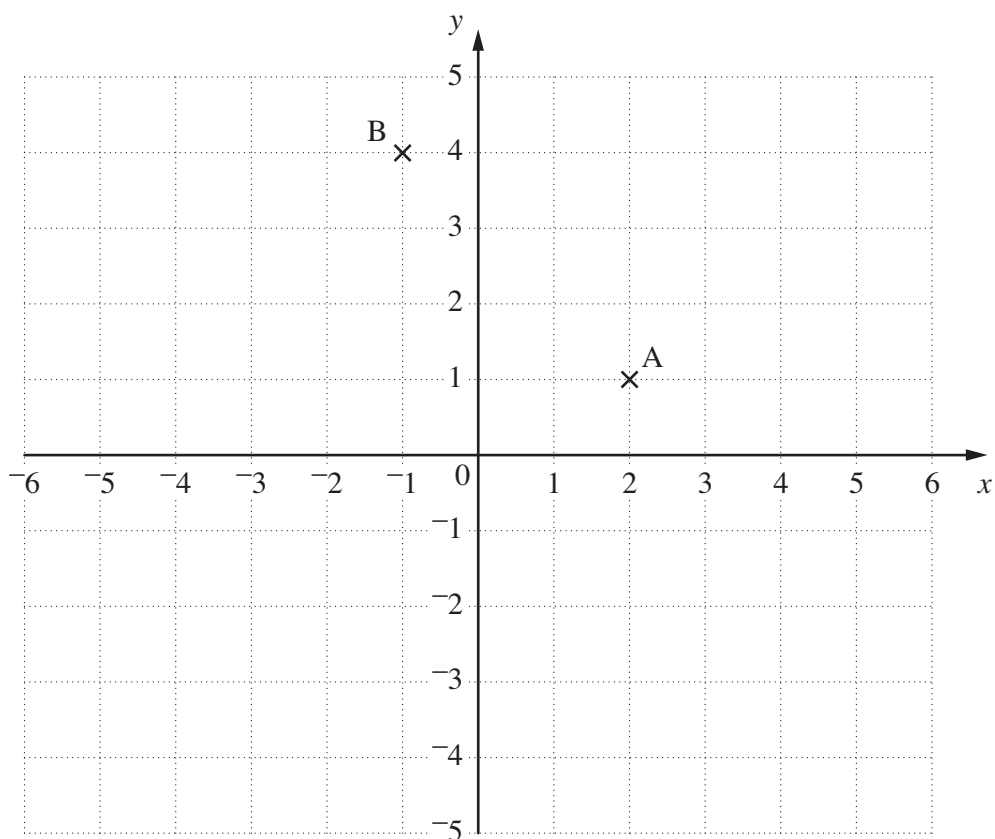


$$\text{Volume of prism} = (\text{area of cross-section}) \times \text{length}$$



PLEASE DO NOT WRITE ON THIS PAGE

1



(a) Write down the coordinates of point B.

(a) (.....,) [1]

(b) Plot the point $(-4, 1)$.
Label it C.

[1]

(c) A, B and C are three corners of a square.
D is the fourth corner of the square.

Mark point D on the diagram.

Write down the coordinates of point D.

(c) (.....,) [2]

2 (a) Write down a decimal between 0.2 and 0.3.

(a) [1]

(b) Write 0.48 as a fraction.

(b) [1]

(c) Write 70% as a fraction.

(c) [1]

3 A bag contains 6 red counters, 3 blue counters and 1 green counter.
A counter is taken at random from the bag.

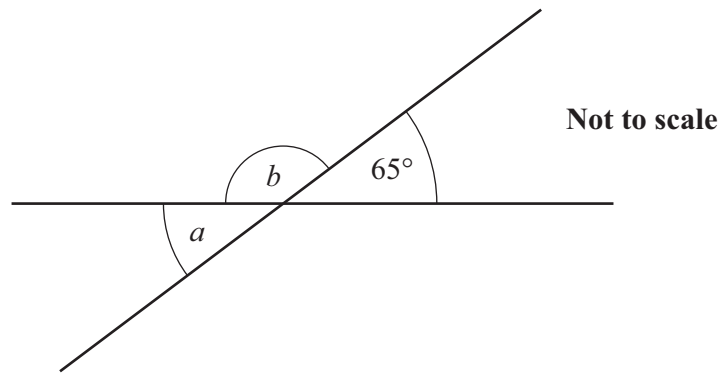
(a) Find the probability that the counter is blue.

(a) [2]

(b) Find the probability that the counter is **not** red.

(b) [1]

4 (a) The diagram shows two straight lines.



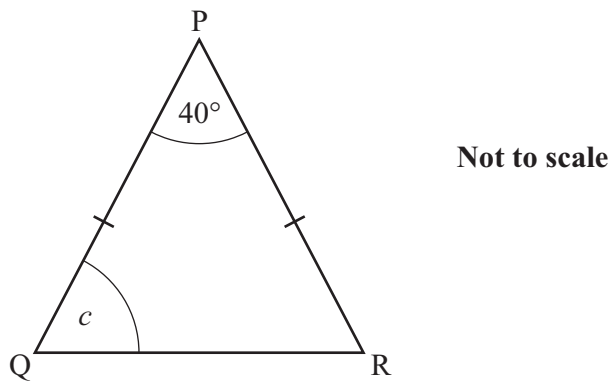
(i) Find the size of angle a .

(a)(i)^o [1]

(ii) Find the size of angle b .

(ii)^o [1]

(b)

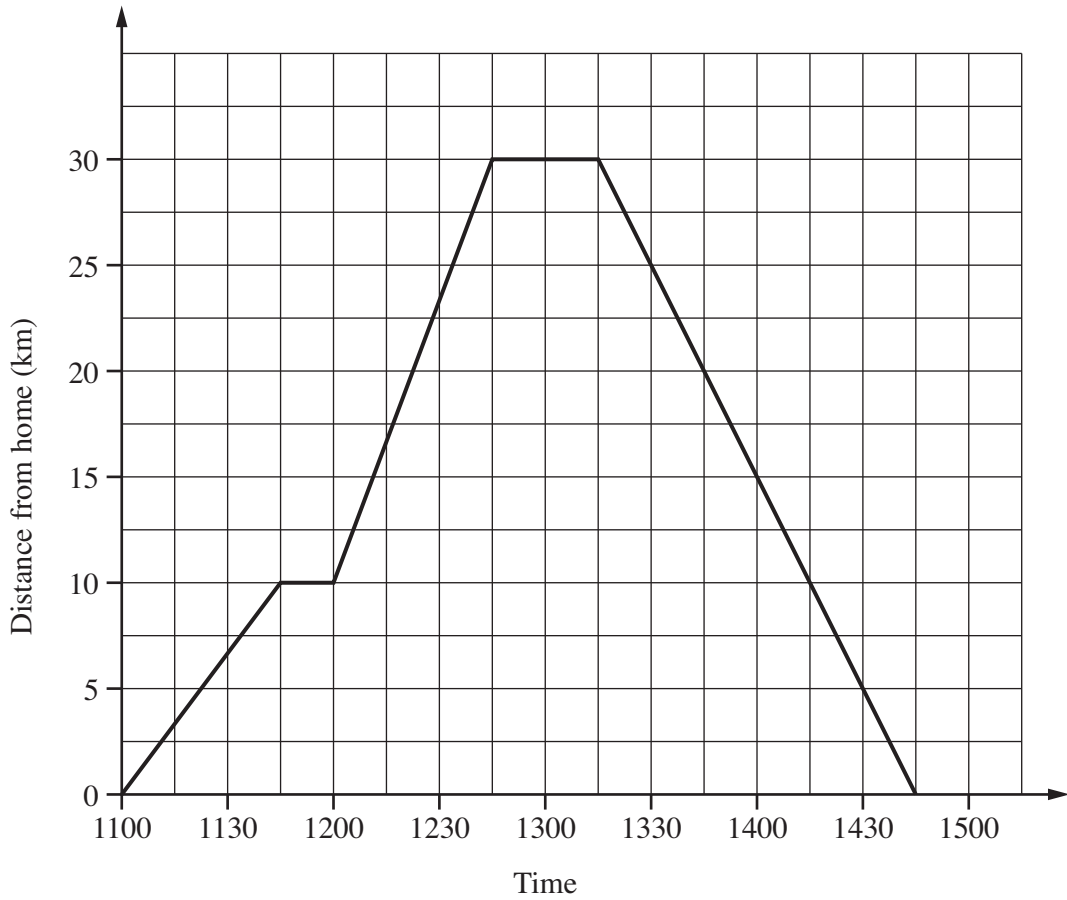


In this triangle $PQ = PR$.

Find the size of angle c .

(b)^o [2]

- 5 (a) Frank went for a cycle ride.
This graph shows his journey.



- (i) How far from home was Frank when he first stopped?

(a)(i) km [1]

- (ii) Frank says:

I cycled faster after my first stop than I did before it.

Explain how the graph shows that Frank is right.

.....
..... [1]

(iii) At what time did Frank start to cycle back home?

(iii) [1]

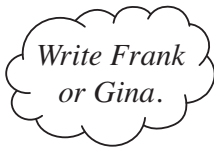
(iv) Frank had two stops during his journey.

How long altogether did he spend actually cycling?

(iv) hours [2]

(b) Frank cycled a total of 60 km.
Gina cycled 60 miles.

Who cycled further?
Explain how you know.



..... because

..... [1]

TURN OVER FOR QUESTIONS 6 AND 7

6 Work out.

$$322 \div 14$$

You must show all your working.

..... [3]

7 A small bag contains n sweets.
A large bag contains 10 more sweets than a small bag.

Write down an expression for the total number of sweets in 2 small bags and 1 large bag.

..... [2]



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