

Candidate forename		Candidate surname	
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Centre number						Candidate number				
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**OXFORD CAMBRIDGE AND RSA EXAMINATIONS
GENERAL CERTIFICATE OF SECONDARY EDUCATION**

B274A

**MATHEMATICS C
(GRADUATED ASSESSMENT)**

MODULE M4 (SECTION A)

TUESDAY 21 JUNE 2011: Afternoon

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)

WARNING

**No calculator can be used for
Section A of this paper.**

READ INSTRUCTIONS OVERLEAF

INSTRUCTIONS TO CANDIDATES

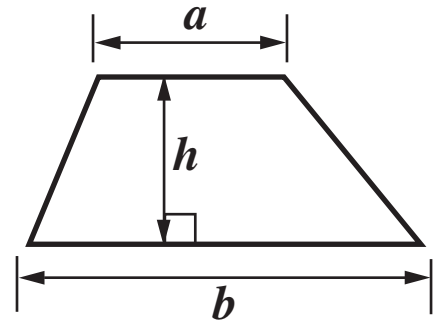
- **Write your name, centre number and candidate number in the boxes on the first page. Please write clearly and in capital letters.**
- **Use black ink. Pencil may be used for graphs and diagrams only.**
- **Read each question carefully. Make sure you know what you have to do before starting your answer.**
- **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.**

INFORMATION FOR CANDIDATES

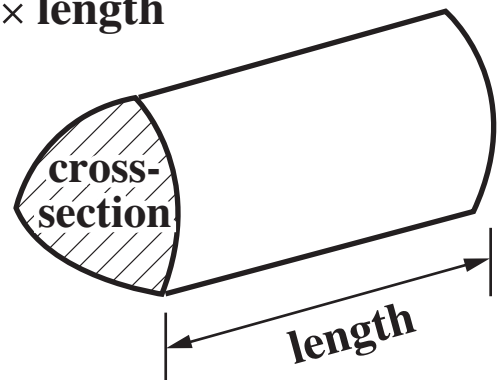
- **The number of marks is given in brackets [] at the end of each question or part question.**
- **The total number of marks for this Section is 25.**

Formulae Sheet

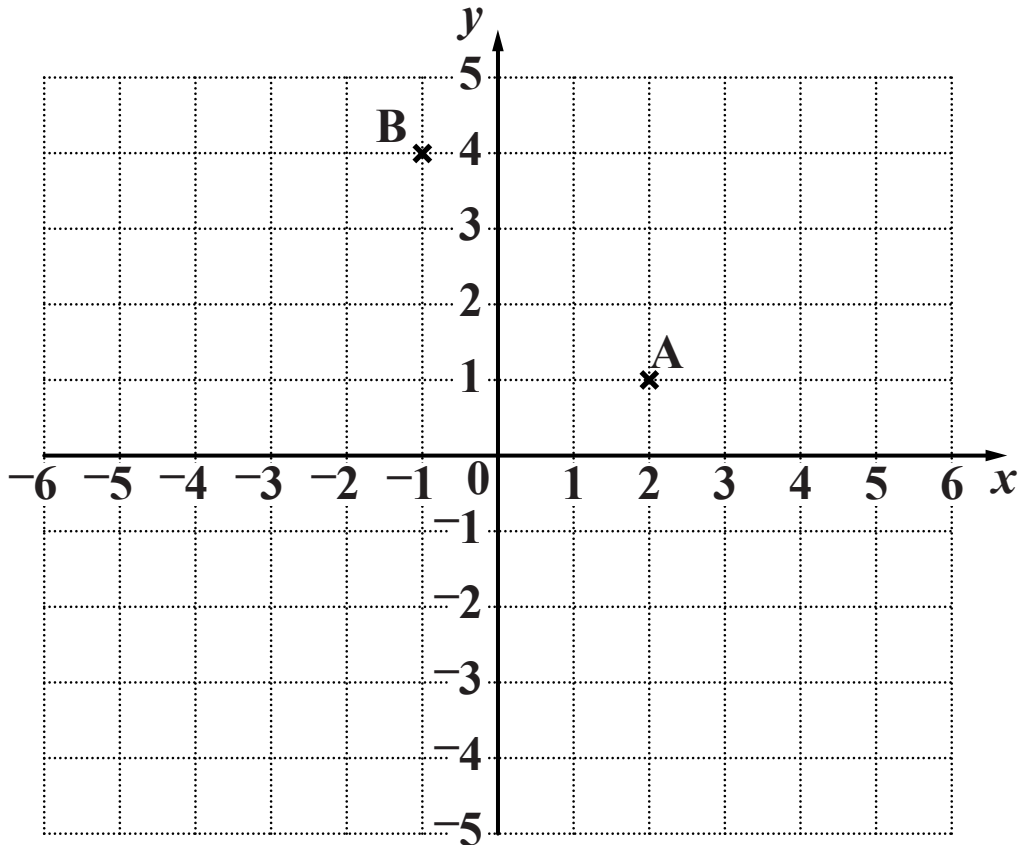
$$\text{Area of trapezium} = \frac{1}{2} (a + b)h$$



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



1 Here is a coordinate grid.



(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.

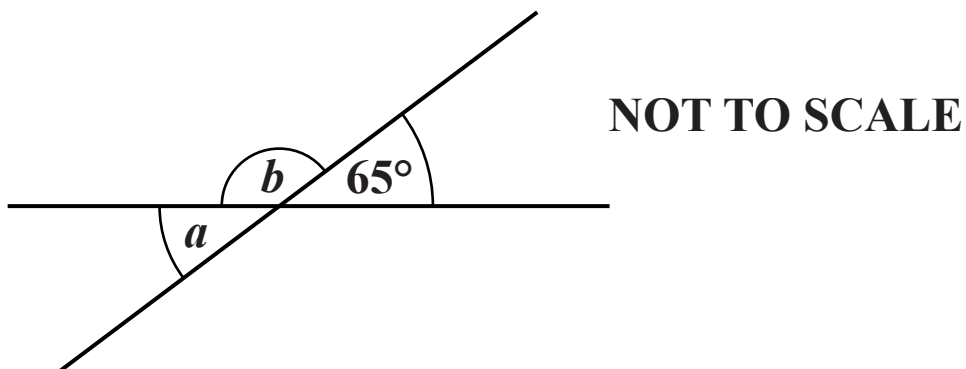
(a) Find the probability that the counter is blue.

(a) _____ [2]

(b) Find the probability that the counter is NOT red.

(b) _____ [1]

4 (a) The diagram shows two straight lines.



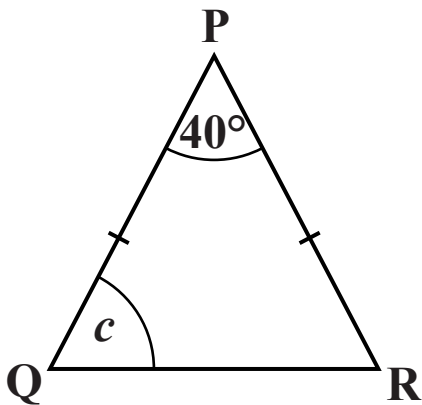
(i) Find the size of angle a .

(a)(i) _____[°] [1]

(ii) Find the size of angle b .

(ii) _____[°] [1]

(b) In this triangle below, $PQ = PR$.



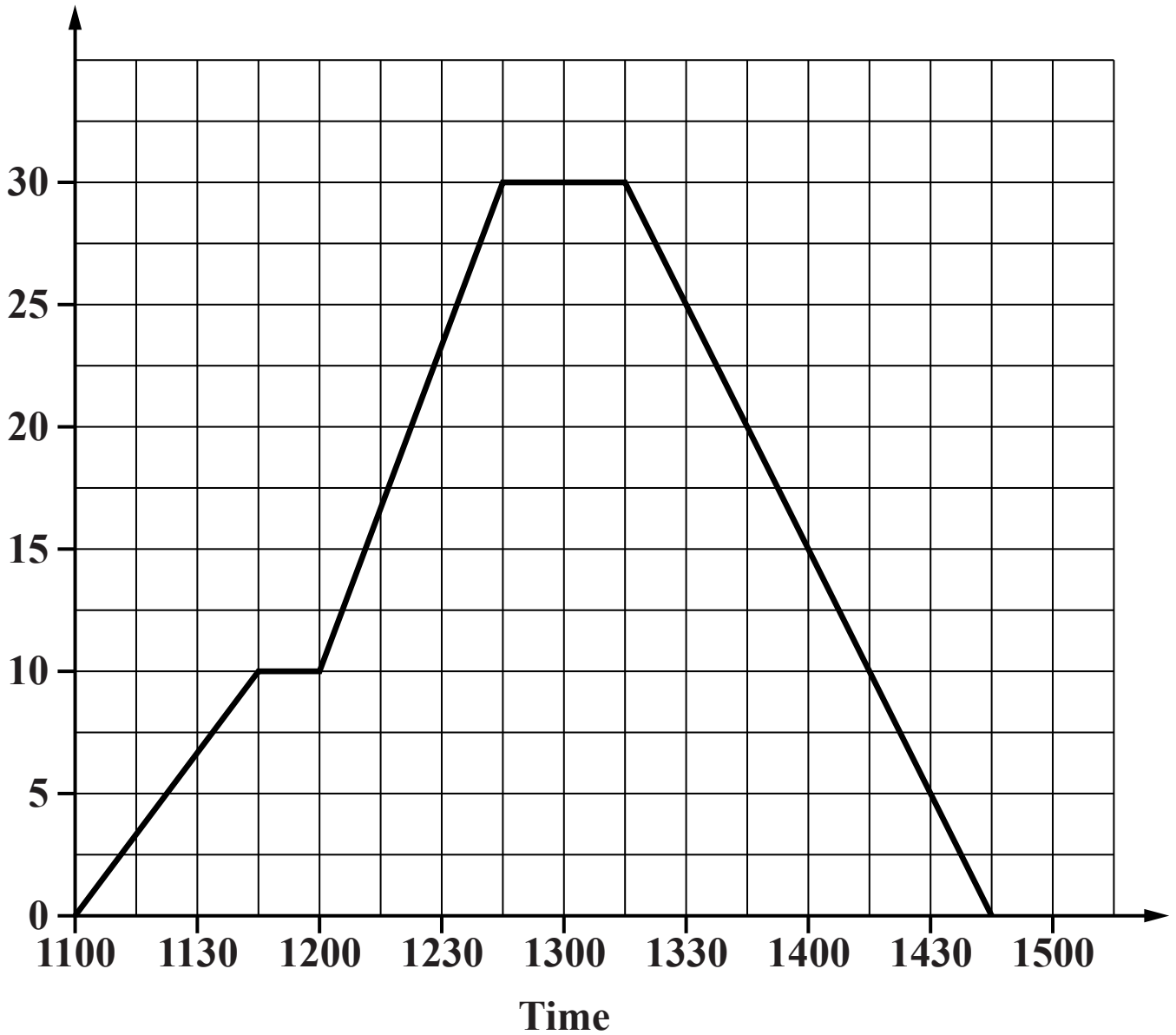
NOT TO SCALE

Find the size of angle c .

(b) _____[°] [2]

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

Distance from home (km)



- (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]

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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