

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**

B271A

**MATHEMATICS C
(GRADUATED ASSESSMENT)**

MODULE M1 – SECTION A

THURSDAY 21 JANUARY 2010: 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

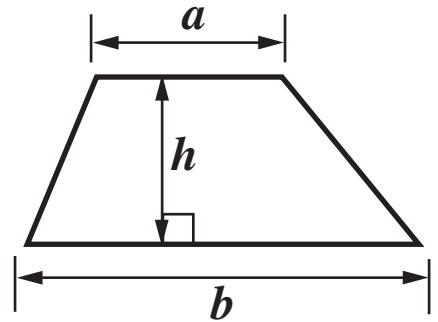
- **Write your name clearly in capital letters, your Centre Number and Candidate Number in the boxes on the first page.**
- **Use black ink. Pencil may be used for graphs and diagrams only.**
- **Read each question carefully and make sure that you know what you have to do before starting your answer.**
- **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

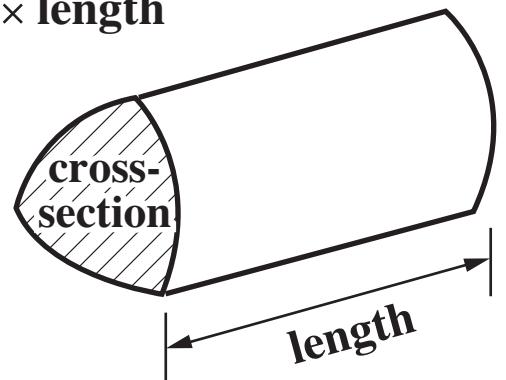
- **The number of marks is given in brackets [] at the end of each question or part question.**
- **The total number of marks for this Section is 25.**

Formulae Sheet

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



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



1 Work out.

(a) $52 + 15$
[1 mark]

(a) _____

(b) $71 - 23$
[1 mark]

(b) _____

(c) 7×5
[1 mark]

(c) _____

(d) $18 \div 3$
[1 mark]

(d) _____

2 Jenna has these three letter tiles.



Jenna puts these three tiles in a line.

**(a) Write down all the ways she can do this.
One has been done for you.
[2 marks]**

N	B	I

*You may not need
all the rows.*

(b) Look at these words.

likely unlikely certain evens impossible

Choose the best word to complete each of these sentences.

(i) Jenna is _____ to make a line with **I** in it.
[1 mark]

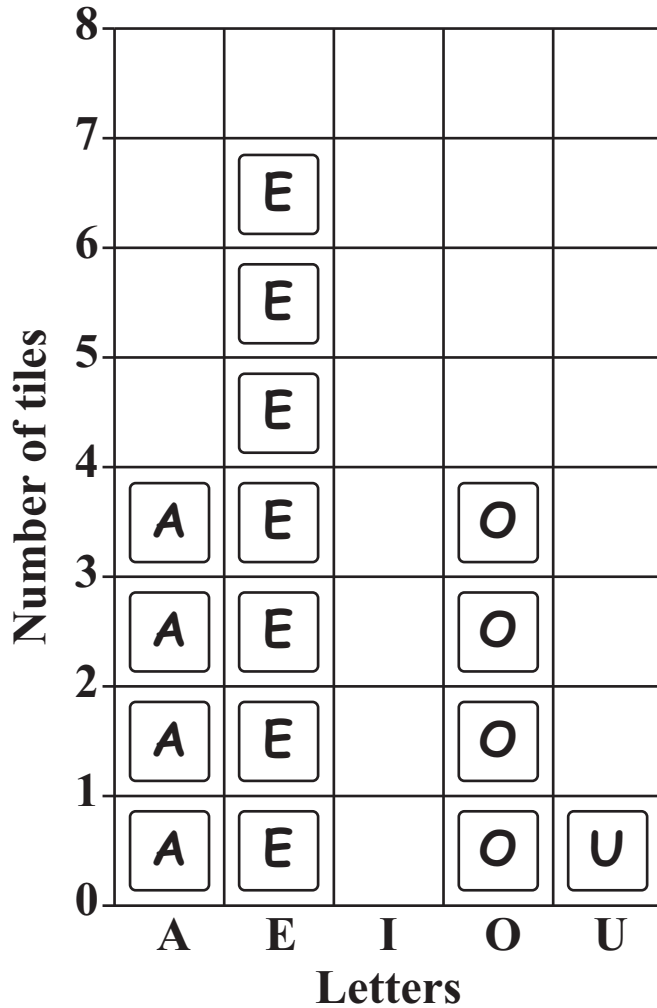
(ii) It is _____ that Jenna's line is **C A T**.
[1 mark]

(iii) It is _____ that Jenna's line starts with **B**.
[1 mark]

(c) Geoff has 19 tiles.

Each tile has one of the letters **A**, **E**, **I**, **O** or **U** on it.

He puts the tiles onto squared paper to make this graph.

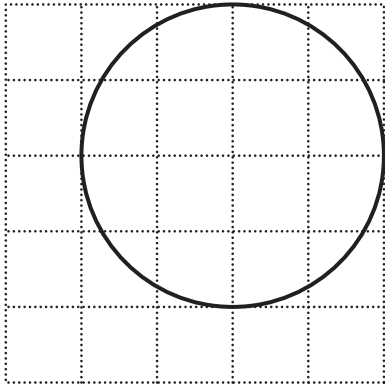


Geoff only has the **I** tiles left.

Complete the graph.

[2 marks]

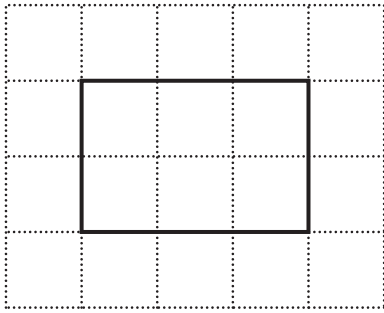
3 Here is a circle drawn on a grid of centimetre squares.



**(a) What is the length of the radius of this circle?
[1 mark]**

(a) _____ cm

(b) Here is a rectangle drawn on a grid of centimetre squares.



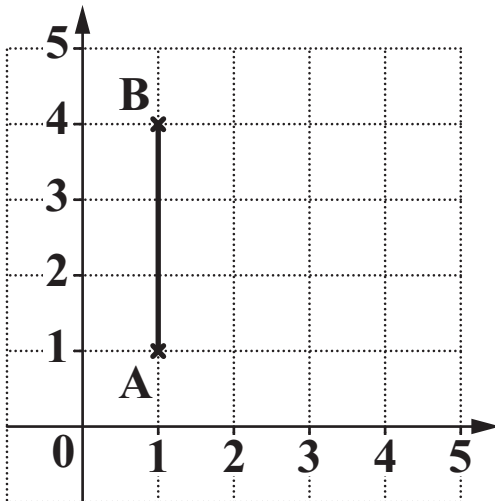
**(i) What is the perimeter of this rectangle?
[1 mark]**

(b)(i) _____ cm

**(ii) What is the area of this rectangle?
[1 mark]**

(ii) _____ cm²

(c)



- (i) Write down the coordinates of point B.
[1 mark]

(c)(i) (_____ , _____)

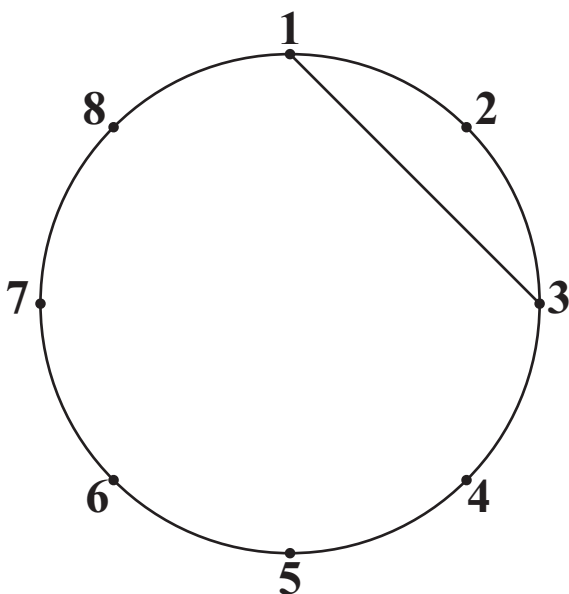
- (ii) Plot a point at (3, 4).
Label it C.
[1 mark]

- (iii) Draw the line from C to A and the line from C to B.

What shape is ABC?
[1 mark]

(iii) _____

- 4 (a) This diagram shows a children's playground with posts numbered from 1 to 8.



- (i) Jayne walks in straight lines from post 1 to post 3, then from 3 to 5, then from 5 to 7 and then from 7 to 1.

On the diagram, draw the lines Jayne walks along. The first one has been drawn for you.

[1 mark]

- (ii) What is the name of the shape you have drawn?
[1 mark]

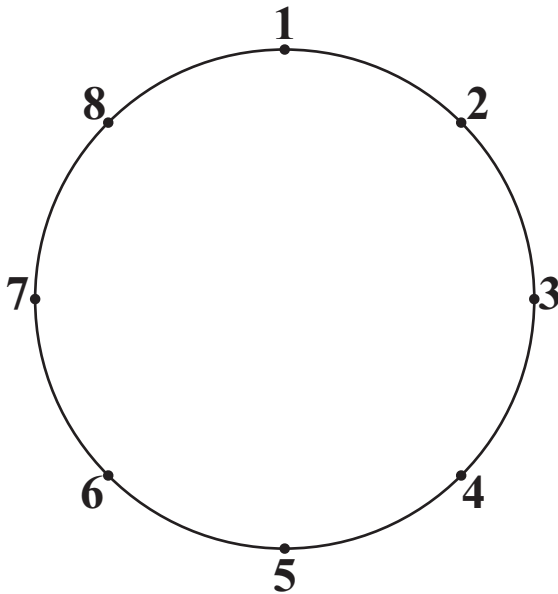
(a)(ii) _____

(b) Freddie is at post 1.

He wants to walk from post to post so that his path is a triangle with two sides the same length.

Draw a path for him.

[2 marks]

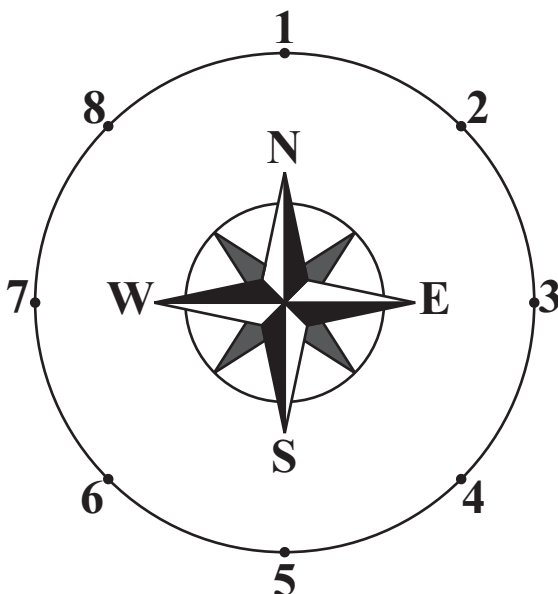


(c) The playground has a compass marked on the ground.

Aled walks in a straight line from post 2 to post 6.

In which direction does he walk?

[1 mark]



(c) _____

5 Ruby gets to the station and looks at the station clock.



**(a) What time is shown on the station clock?
[1 mark]**

(a) _____

(b) Cameron tells her, “The station clock is 10 minutes slow!”

Ruby’s train arrives at 14:40.

**How long does she have to wait?
[2 marks]**

(b) _____ minutes



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