

**GENERAL CERTIFICATE OF SECONDARY EDUCATION
MATHEMATICS C (GRADUATED ASSESSMENT)
MODULE M1 – SECTION A**

B271A

Candidates answer on the Question Paper

OCR Supplied Materials:
None

Other Materials Required:

- Geometrical instruments
- Tracing paper (optional)

**Thursday 21 January 2010
Afternoon**

Duration: 30 minutes



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

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


INSTRUCTIONS TO CANDIDATES

- Write your name clearly in capital letters, your Centre Number and Candidate Number in the boxes above.
- 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.
- Do **not** write in the bar codes.
- 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**.
- This document consists of **12** pages. Any blank pages are indicated.

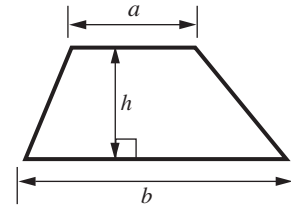
WARNING



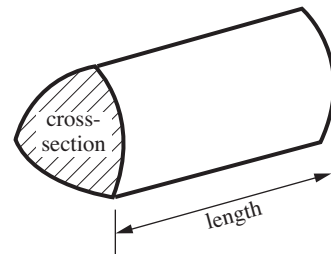
No calculator can be used for Section A of this paper

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

1 Work out.

(a) $52 + 15$

(a) [1]

(b) $71 - 23$

(b) [1]

(c) 7×5

(c) [1]

(d) $18 \div 3$

(d) [1]

2 Jenna has these three letter tiles.

N

B

I

Jenna puts these three tiles in a line.

- (a) Write down all the ways she can do this.
One has been done for you.

| | | |
|---|---|---|
| N | B | I |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

*You may not need all
the rows.*

[2]

(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]

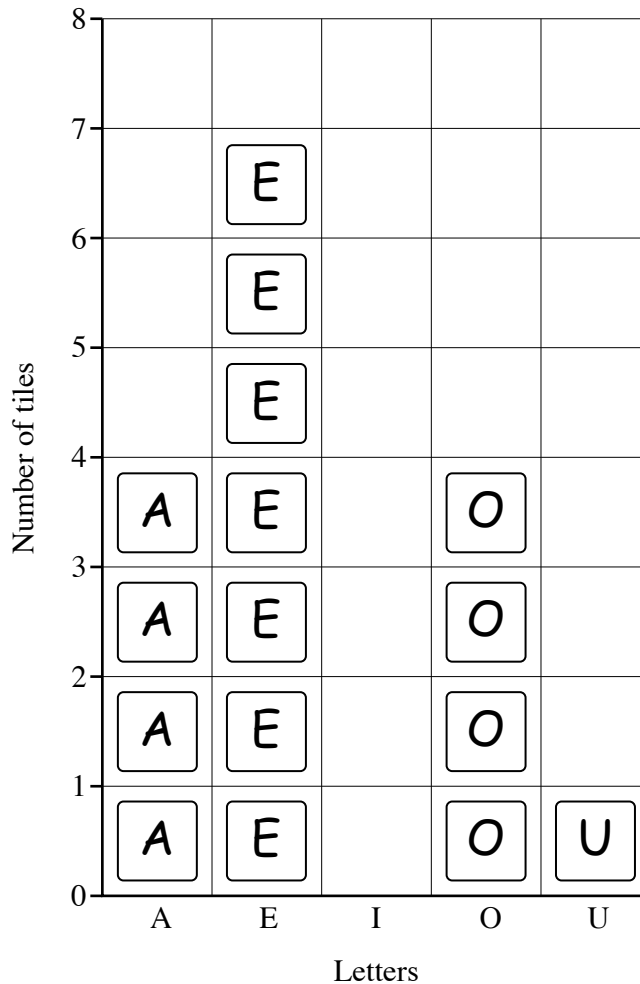
(ii) It is that Jenna's line is **C A T**. [1]

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

(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.



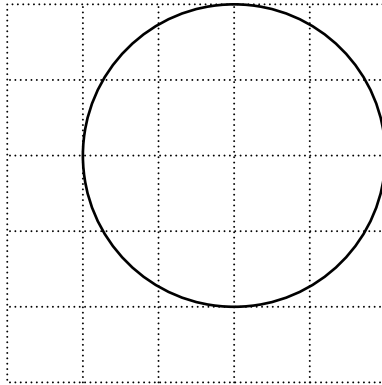
Geoff only has the **I** tiles left.

Complete the graph.

[2]

Turn over

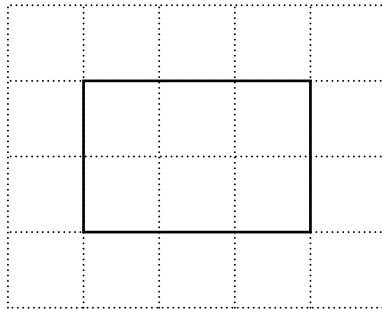
3 Here is a circle drawn on a grid of centimetre squares.



(a) What is the length of the radius of this circle?

(a) cm [1]

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



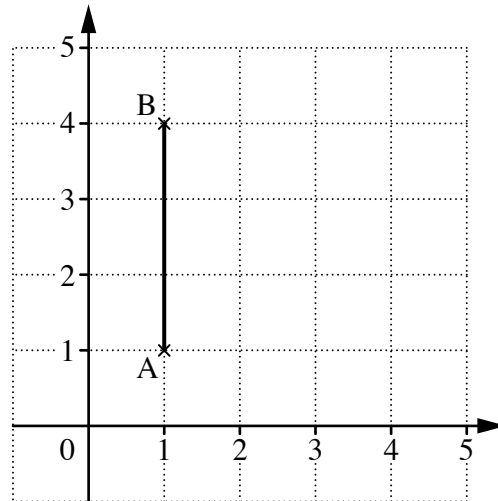
(i) What is the perimeter of this rectangle?

(b)(i) cm [1]

(ii) What is the area of this rectangle?

(ii) cm^2 [1]

(c)



(i) Write down the coordinates of point B.

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

(ii) Plot a point at (3, 4).
Label it C.

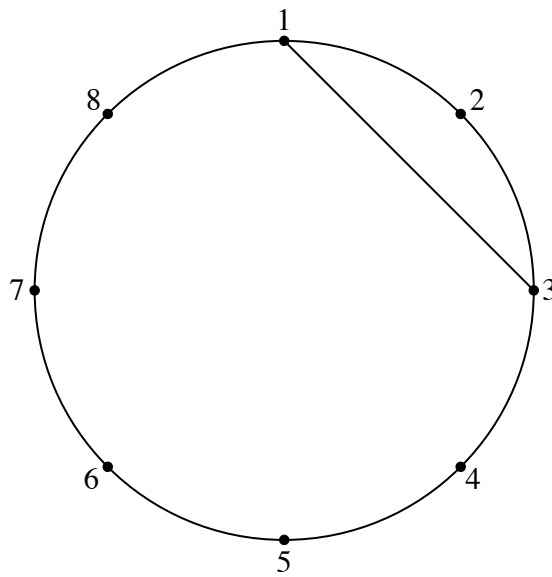
[1]

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

What shape is ABC?

(iii) [1]

- 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.

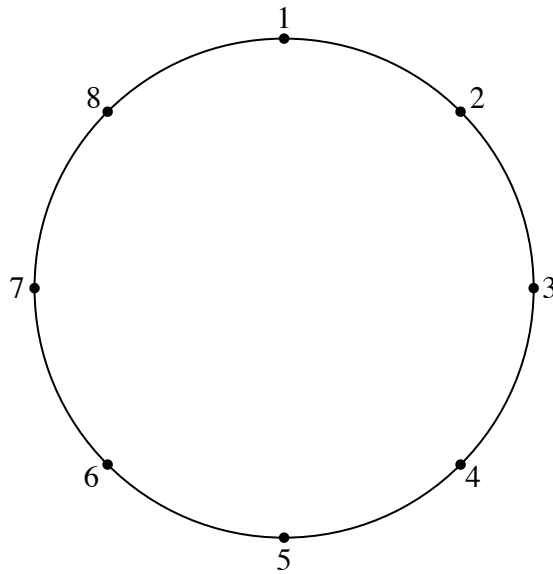
[1]

- (ii) What is the name of the shape you have drawn?

(a)(ii) [1]

- (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.

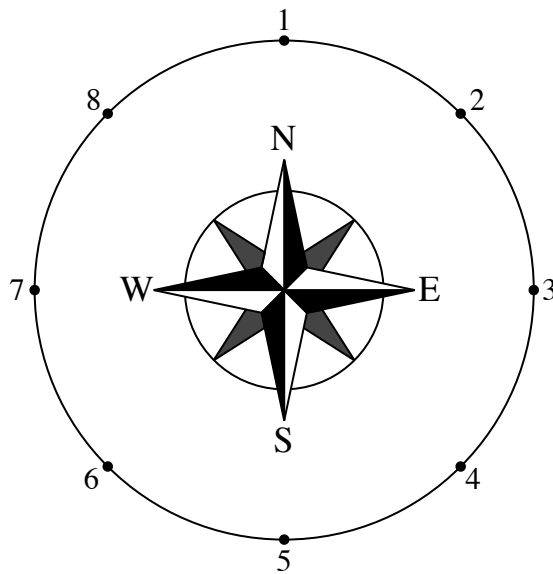
Draw a path for him.



[2]

- (c) The playground has a compass marked on the ground.
Aled walks in a straight line from post 2 to post 6.

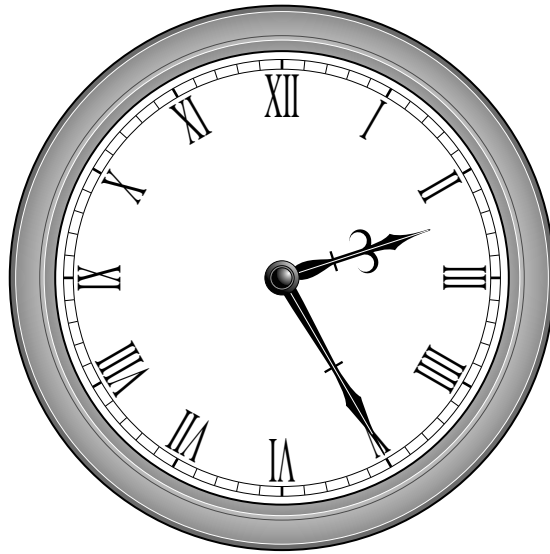
In which direction does he walk?



(c) [1]

TURN OVER FOR QUESTION 5

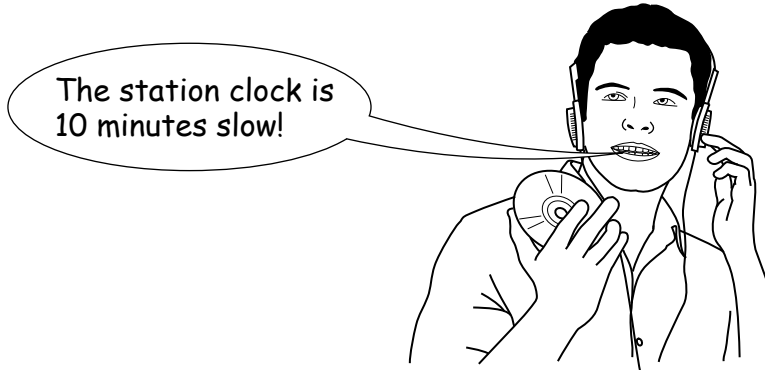
5 Ruby gets to the station and looks at the station clock.



(a) What time is shown on the station clock?

(a) [1]

(b) Cameron tells her:



Ruby's train arrives at 14:40.

How long does she have to wait?

(b) minutes [2]

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