

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**

B275B

**MATHEMATICS C
(GRADUATED ASSESSMENT)**

MODULE M5 (SECTION B)

THURSDAY 20 JANUARY 2011: Morning

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)
Pie chart scale (optional)
Electronic calculator**

READ INSTRUCTIONS OVERLEAF

INSTRUCTIONS TO CANDIDATES

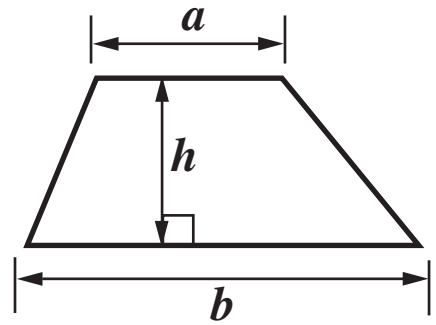
- **Write your name, centre number and candidate number in the boxes on the first page. Please write clearly and in capital letters.**
- **Use black ink. Pencil may be used for graphs and diagrams only.**
- **Read each question carefully. Make sure you know what you have to do before starting your answer.**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

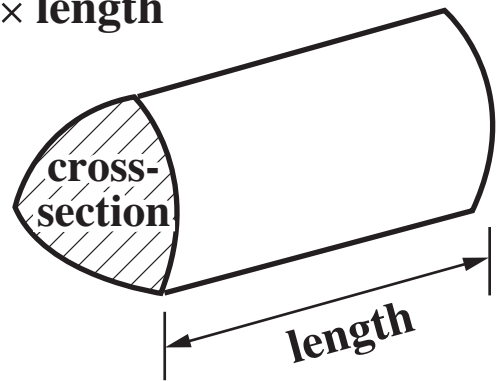
- **The number of marks is given in brackets [] at the end of each question or part question.**
- **Section B starts with question 9.**
- **You are expected to use a calculator in Section B of this paper.**
- **The total number of marks for this Section is 25.**

FORMULAE SHEET

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



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



- 9 (a) This formula is used to work out the cost for Geoff's mobile phone.

$$T = 35m - 18$$

T is the total cost in pounds (£) and m is the number of months.

Calculate the total cost for 14 months.

(a) £ _____ [2]

- (b) This formula is used to work out the cost for Ruth's mobile phone.**

$$C = 7d + 12 \cdot 5t$$

C is the total cost in pence, d is the total length of calls in minutes and t is the number of texts sent.

Calculate the total cost for 48 minutes of calls and 16 texts.

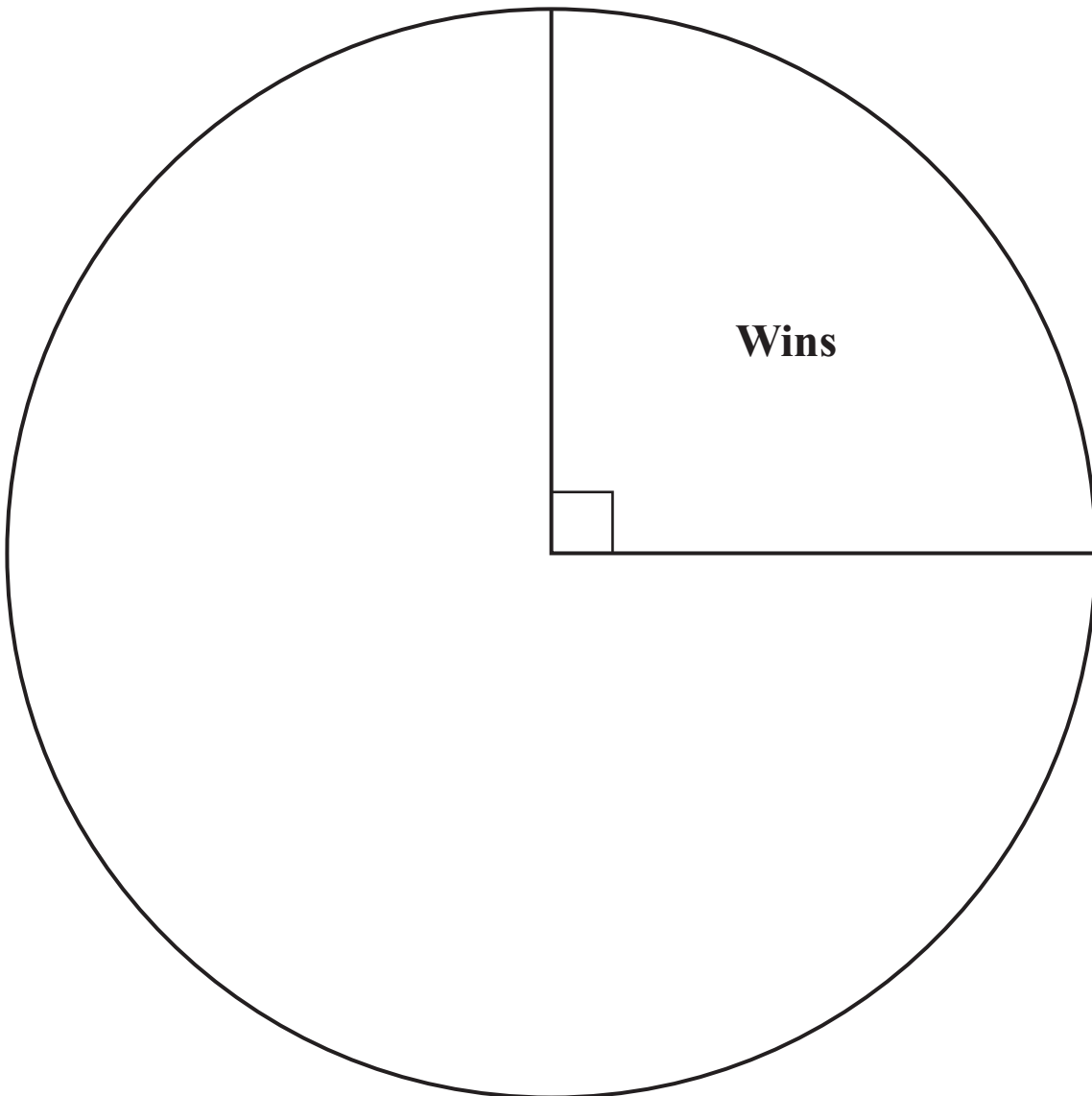
(b) _____ p [2]

- 10 In a test Brenda scored 17 out of 25.**

Calculate this score as a percentage.

_____ % [2]

- 11 Eddie records the results of his favourite team.
There are 48 results altogether.
The pie chart shows the sector for wins.**



- (a) Use the pie chart to work out how many wins there were.**

(a) _____ [2]

(b) There were 16 losses in the 48 matches.

Draw and label the sector for 'losses'.

[2]

12 (a) The table shows some properties of quadrilaterals.

For each box in the table, tick (✓) if the quadrilateral ALWAYS has that property, or cross (X) if not.

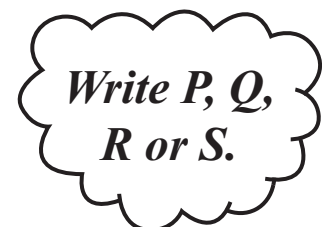
	All four sides equal	Both pairs of opposite angles equal	Diagonals bisect at 90°
square			
rhombus			
kite			

[3]

(b) A quadrilateral has the following properties.

P	Opposite angles are equal.
Q	Diagonals meet at right angles.
R	Opposite sides are equal.
S	Diagonals bisect each other.

Which one of these properties means that the quadrilateral CANNOT be a rectangle?



(b) _____ [1]

- 13 (a) Triangle ABC is an equilateral triangle with side length 6 cm.**

Draw triangle ABC accurately.

The base, AB, has been drawn for you.



[2]

- (b) Measure the perpendicular height, in centimetres, of C above the base AB.**

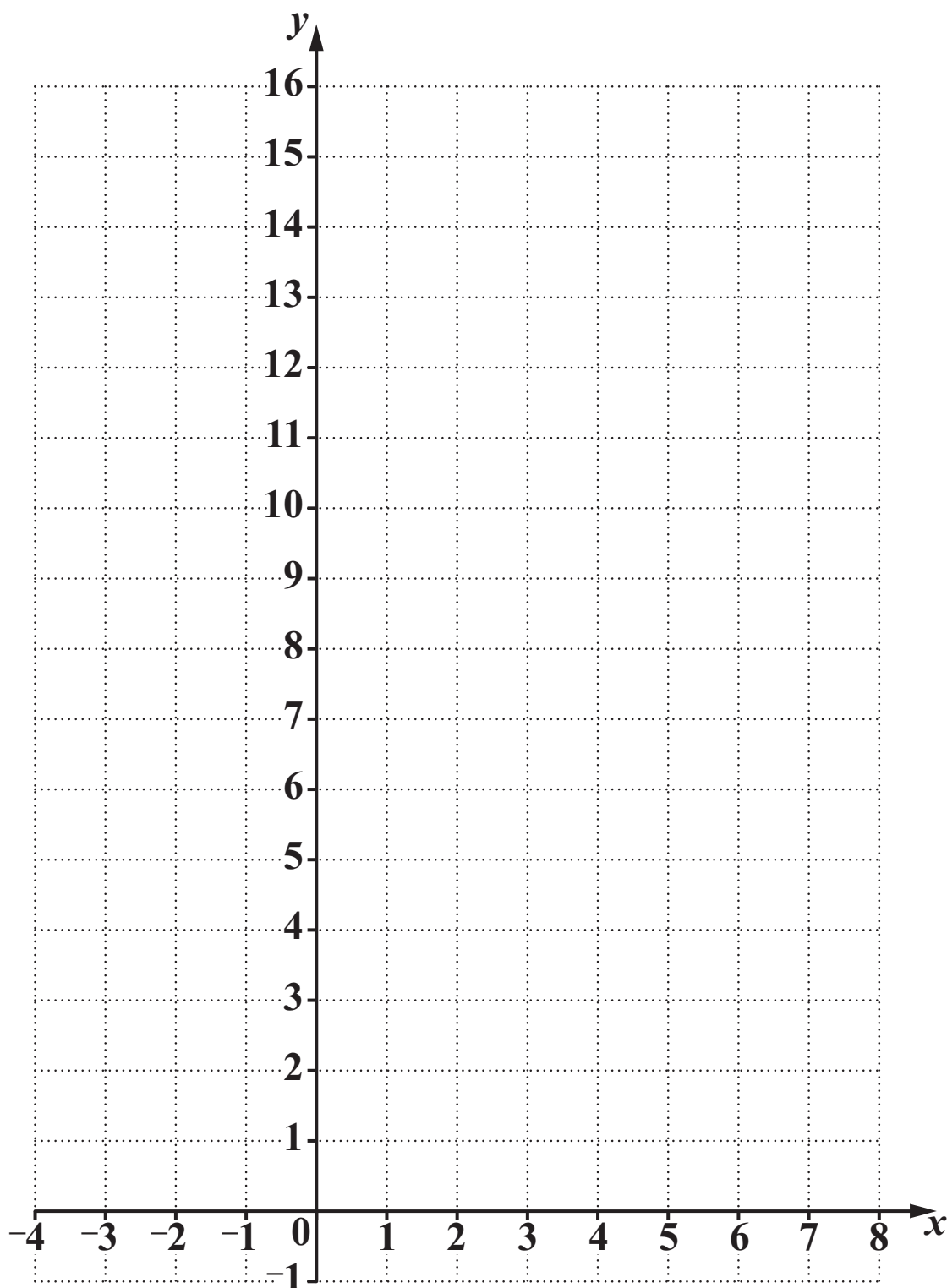
(b) _____ cm [1]

14 (a) Complete this table for $y = x + 6$.

x	-4	0	4	8
y		6		

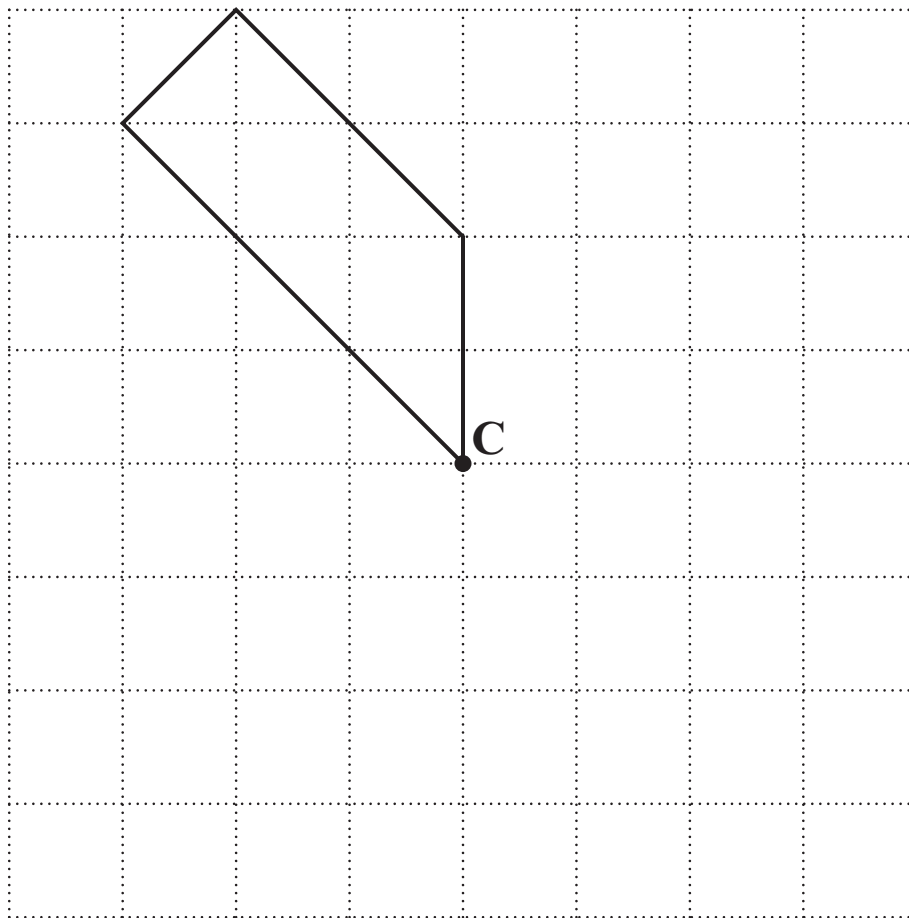
[1]

(b) Draw the graph of $y = x + 6$.



[2]

15 Complete the pattern so that it has rotation symmetry of order 2 about C.



[1]

TURN OVER FOR QUESTION 16.

**16 A pair of shoes is priced at £65.
In a sale this price is reduced by 30%.
Harry buys the shoes in the sale with a £50 note.**

How much change does he get?

£ _____ [4]



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