OCR
RECOGNISING ACHIEVEMENT

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GENERAL CERTIFICATE OF SECONDARY EDUCATION

MATHEMATICS B (MEI)

B291A

Paper 1 Section A
(Foundation Tier)

OCE/T67637

Candidates answer on the question paper

OCR Supplied Materials:
None

Other Materials Required:
- Geometrical instruments
- Tracing paper (optional)

Monday 18 May 2009
Afternoon

Duration: 45 minutes

B291A

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

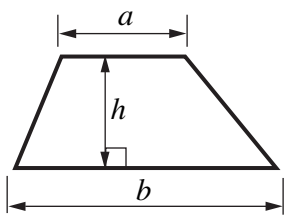
- The number of marks is given in brackets **[ ]** at the end of each question or part question.
- The total number of marks for this Section is **36**.
- This document consists of **12** pages. Any blank pages are indicated.

WARNING

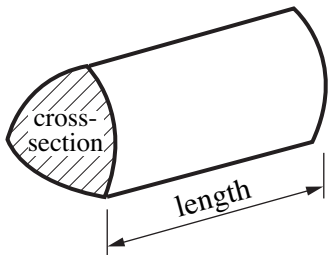
No calculator can be used for Section A of this paper

Formulae Sheet: Foundation Tier

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



Volume of prism = (area of cross-section) × length



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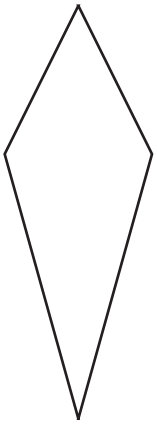
1 Label each shape by choosing the correct name from the list.

parallelogram	kite	trapezium
rectangle	rhombus	square



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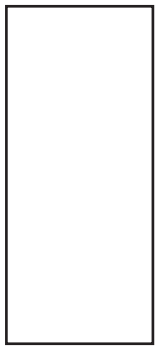

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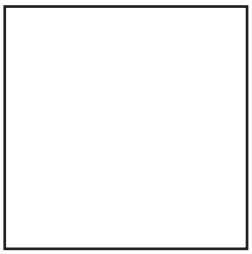


.....

[5]

2 Work out the following.

(a) 173 + 282

(a) ..... **[1]**

(b) 908 – 364

(b) ..... **[1]**

(c) 231 × 14

(c) ..... **[2]**

3 **(a)** Write the fraction $\frac{3}{100}$ as a decimal.

(a) ..... **[1]**

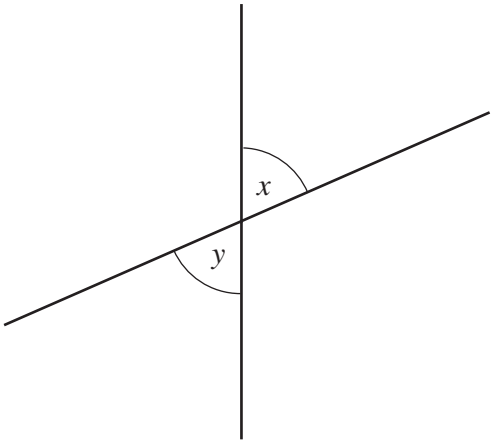
(b) Arrange these in order of size, starting with the smallest.

0.6 0.09 0.38

(b) ..... , ... , ... **[1]**

smallest

4 **(a)** The diagram shows two intersecting straight lines.



(i) What type of angle is x?
Choose from this list.

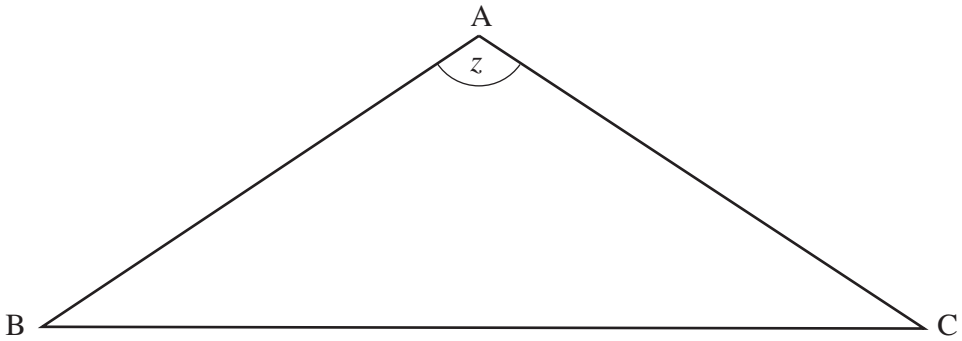
reflex	obtuse	right angle	acute

(a)(i) ..... **[1]**

(ii) Without measuring, how do you know that angle y is equal to angle x?

Reason ..... **[1]**

(b) The diagram shows a triangle.



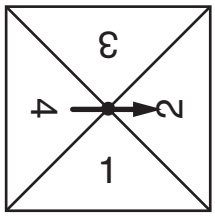
(i) Measure the line BC.

(b)(i) .....cm **[1]**

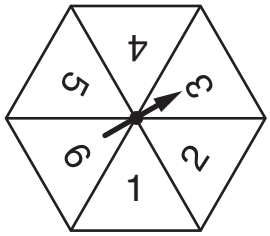
(ii) Measure the angle z.

(ii) .....° **[1]**

5



Spinner A



Spinner B

Ronnie spins these two spinners.
His total is the sum of the scores on the two spinners.
The diagram shows the outcome (2, 3) which gives a total of 5.

(a) What is the smallest possible total?

(a) ..... **[1]**

(b) What is the largest possible total?

(b) ..... **[1]**

(c) When showing the outcomes, the score on Spinner A is shown first.

These outcomes each give a total of six.

(1, 5) (2, 4) (3, 3) (4, 2)

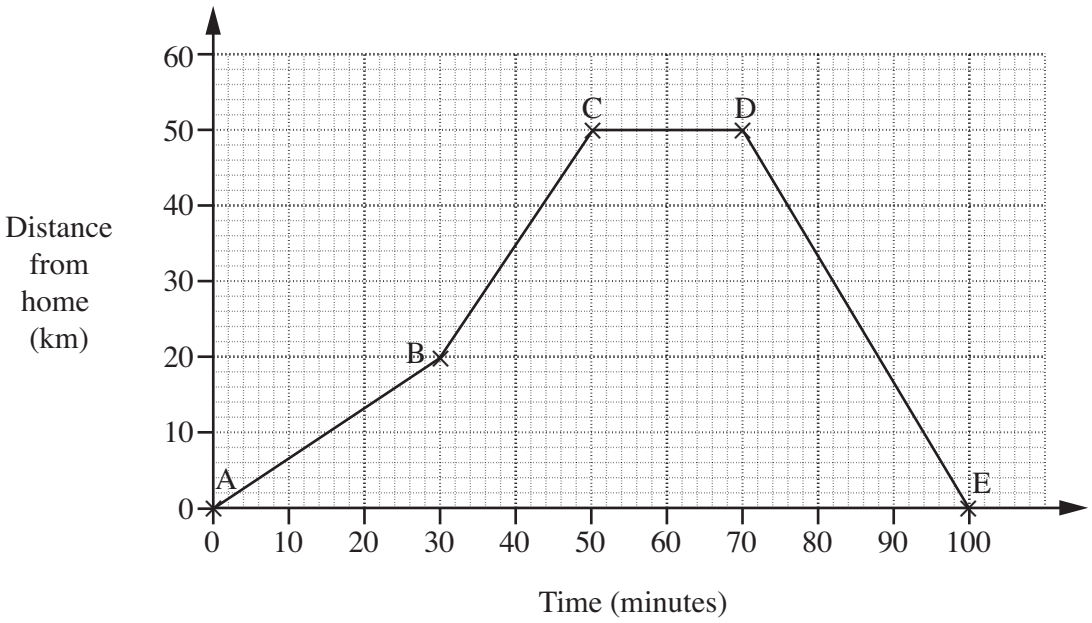
Why is the outcome (5, 1) impossible?

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

(d) List the outcomes which give a total of seven.
You may not need all the spaces.

(,) (,) (,) (,) (,) **[1]**

6 Donna travelled by car to take flowers to her grandparents.
The graph represents her journey.



(a) How far did she travel in the first thirty minutes?

(a) ..... km **[1]**

(b) How long did she stay at her grandparents' house?

(b) .....mins **[1]**

(c) What does section DE of the graph represent?

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

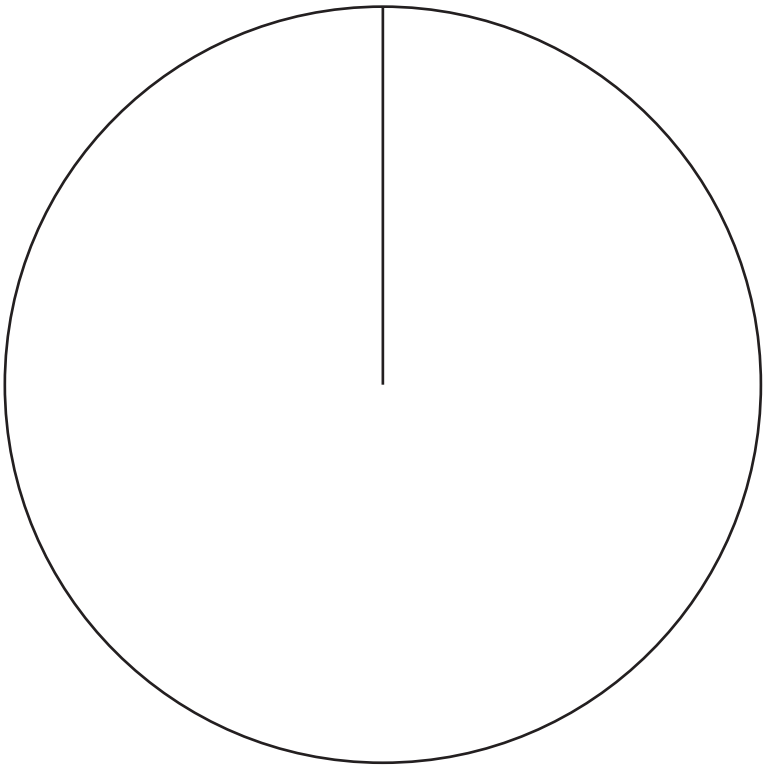
7 A group of 60 students vote for an end of term activity.
The results are shown in the table.

Activity	Number of votes
Video	25
Number game	5
Quiz	10
Music	20

(a) Why does a total of 60 make it easy to work out the angles for a pie chart?

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

(b) Draw a pie chart to show this information. **[4]**



8 **(a)** Simplify the following expressions.

(i) $4x + x + 3x$

(a)(i) ..... **[1]**

(ii) $9y - 2y + 5y$

(ii) ..... **[1]**

(b) Work out $5x + 7y$ when $x = 4$ and $y = -2$.

(b) ..... **[2]**

(c) Solve the following equations.

(i) $4(x - 3) = 14$

(c)(i) ..... **[3]**

(ii) $\frac{x}{4} - 1 = 7$

(ii) ..... **[2]**

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