

OXFORD CAMBRIDGE AND RSA EXAMINATIONS
General Certificate of Secondary Education

MATHEMATICS B (MEI)
PAPER 1 SECTION A
FOUNDATION TIER

1968/2311A

Tuesday **7 JUNE 2005** Afternoon 45 minutes

Candidates answer on the question paper.

Additional materials:
 Geometrical instruments
 Tracing paper (optional)

Candidate Name	Centre Number	Candidate Number										
	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> </tr> </table>						<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> <td style="width: 15px; height: 15px;"></td> </tr> </table>					

TIME 45 minutes

INSTRUCTIONS TO CANDIDATES

- Write your name, Centre number and candidate number in the boxes above.
- Answer **all** the questions.
- Write your answers, in blue or black ink, in the spaces provided on the question paper.
- Read each question carefully and make sure you know what you have to do before starting your answer.
- Show all your working. Marks may be given for working which shows that you know how to solve the problem, even if you get the answer wrong.

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.



WARNING

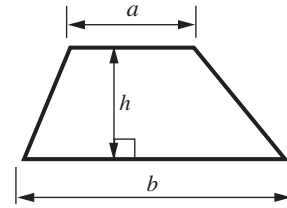
You are not allowed to use a calculator in Section A of this paper.

FOR EXAMINER'S USE	
Section A	
Section B	
TOTAL	

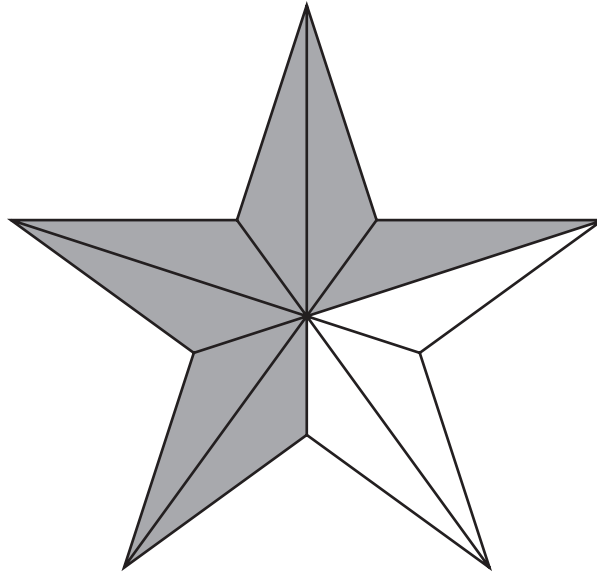
This question paper consists of 10 printed pages and 2 blank pages.

Formula Sheet: Foundation Tier

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



1 (a) What percentage of this shape is shaded?



(a)% [1]

(b) Write

(i) 0.3 as a fraction,

(b)(i)[1]

(ii) 40% as a decimal,

(ii)[1]

(iii) $\frac{1}{4}$ as a decimal,

(iii)[1]

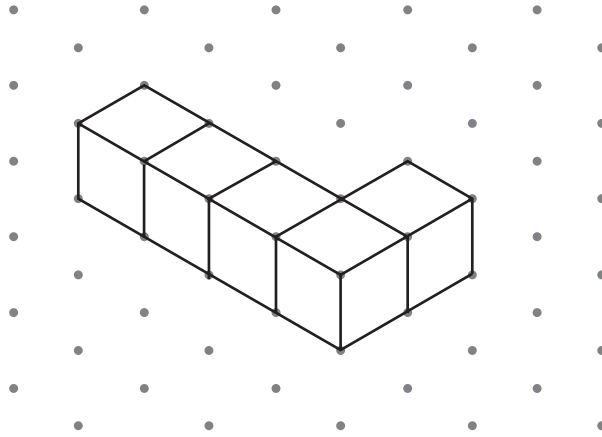
(iv) 0.3, 40% and $\frac{1}{4}$ in order, largest to smallest.

(iv) [1]
largest smallest

- 2 These solids are made from one-centimetre cubes.
There are no hidden cubes.

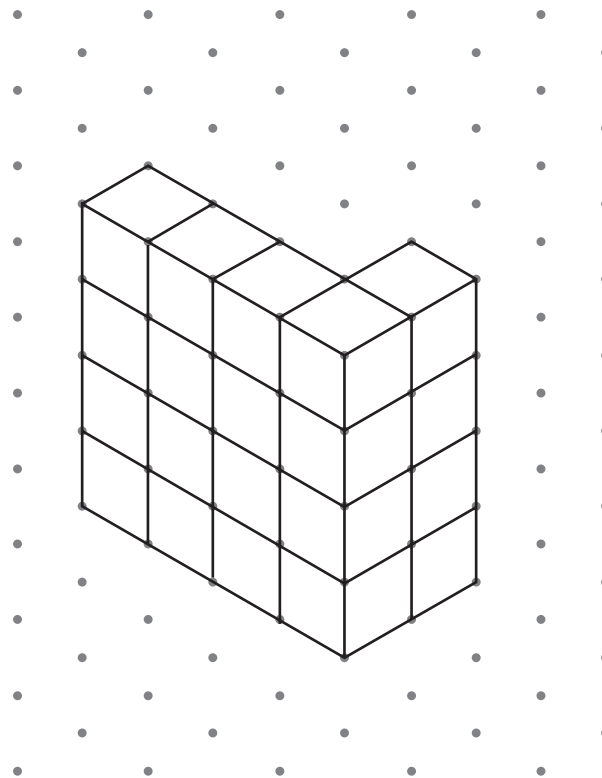
Write down the volume of each solid.

(a)



(a)cm³ [1]

(b)



(b)cm³ [1]

- 3 Nikesh calculates his pay using the following formula.

$$\text{Total pay} = \text{rate per hour} \times \text{number of hours} + \text{bonus}$$

He earns £5.00 per hour.

He receives a bonus of £2.50 if he works more than 8 hours.

Find his total pay when he works

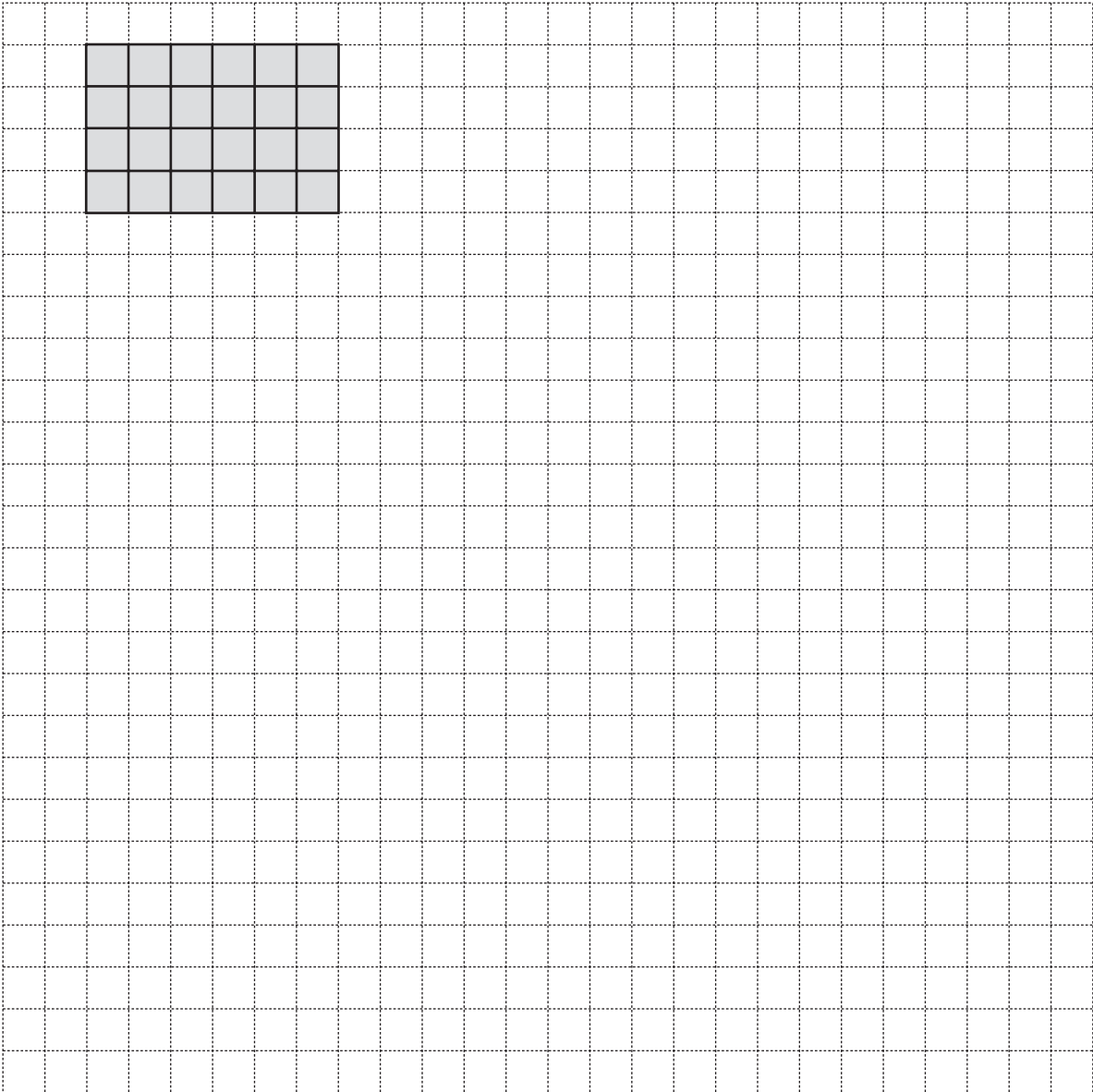
- (a) 7 hours,

(a) £.....[1]

- (b) 9 hours.

(b) £[2]

- 4 Amy has 24 square tiles.
She uses all of the tiles to make a rectangle as shown.



Draw two different rectangles that Amy could make using 24 tiles each time.

[2]

5 (a) Find $\sqrt{64}$.

(a)[1]

(b) What is the place value of 5 in 9520?

(b)[1]

(c) Work out $\frac{3}{4}$ of 32.

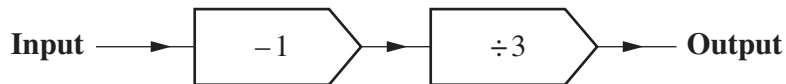
(c)[2]

6 (a) Fill in these boxes.

+ 15 = 19 [1]

- 15 = 19 [1]

(b) Here is a number machine.



Work out

(i) the **output** when the **input** is 16,

(b)(i)[1]

(ii) the **input** when the **output** is 9.

(ii)[2]

(c) Simplify.

$c + c + c$

(c)[1]

7

Always odd

Always even

Sometimes odd
and sometimes even

In this question, n stands for an odd number.

Which of the above describes the following expressions?
Give a reason for each answer.

(a) $2n$

.....

Reason

.....[1]

(b) $3n + 1$

.....

Reason

.....[2]

8 (a) Estimate.

$$104 \times 4.1$$

(a)[2]

(b) Given

$$98 \times 146 = 14308,$$

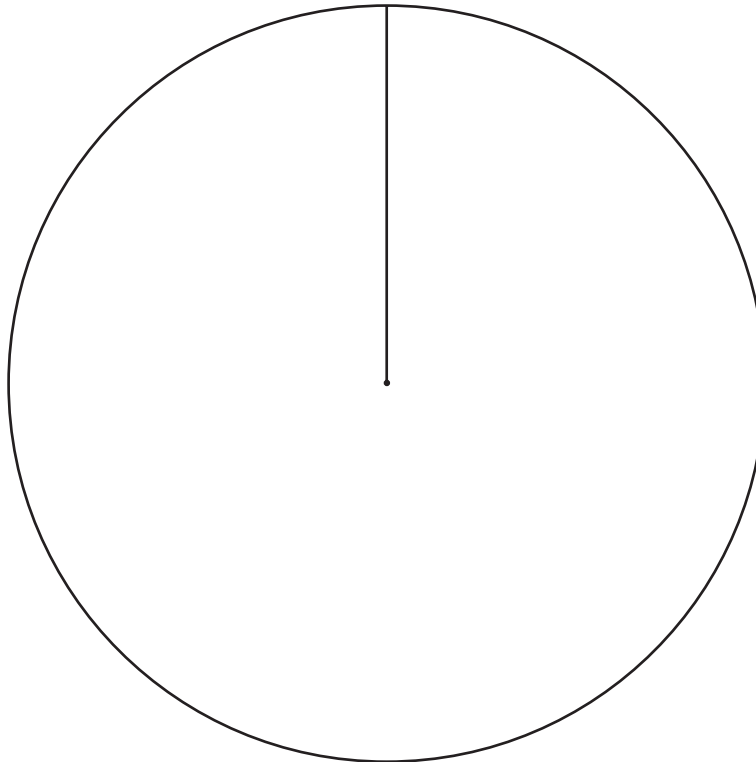
work out $14308 \div 980.$

(b)[1]

- 9 A group of 90 motorists were surveyed about the type of fuel their cars used. The results are shown in the table.

Fuel type	Unleaded	Diesel	Gas	LRP
Number of motorists	50	20	12	8

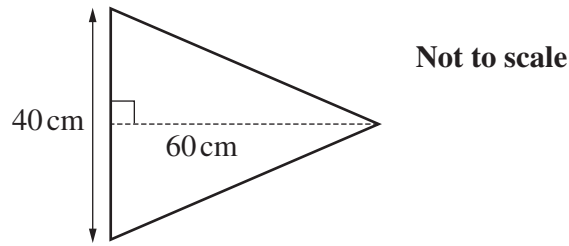
Draw a pie chart to represent these data.



[4]

TURN OVER FOR QUESTION 10

10 The diagram shows a flag used to mark a hole on a golf course.



(a) Calculate the area of the flag.

(a)cm² [2]

(b) Convert your answer for part (a) from square centimetres to square metres.

(b)m² [2]

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