

**GENERAL CERTIFICATE OF SECONDARY EDUCATION  
 MATHEMATICS B (MEI)**

**B261A**

Paper 1 Section A (Foundation Tier)

**THURSDAY 10 JANUARY 2008**

Morning

Time: 45 minutes

Candidates answer on the question paper

**Additional materials:** Geometrical instruments  
 Tracing paper (optional)



Candidate Forename

Candidate Surname

Centre Number

Candidate Number

**INSTRUCTIONS TO CANDIDATES**

- Write your name in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use blue or 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.
- Do **not** write outside the box bordering each page.
- Write your answer to each question in the space provided.

**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**

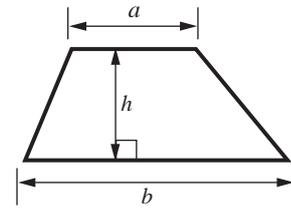
**You are not allowed to use a calculator in Section A of this paper.**

FOR EXAMINER'S USE	
SECTION A	
SECTION B	
TOTAL	

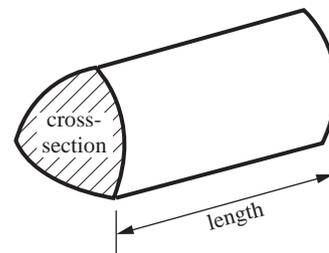
This document consists of **10** printed pages and **2** blank pages.

## Formulae Sheet: Foundation Tier

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

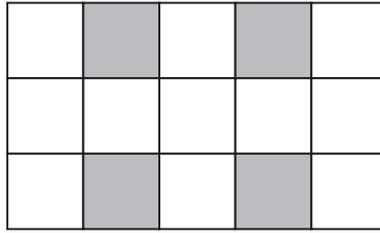


**Volume of prism** = (area of cross-section)  $\times$  length



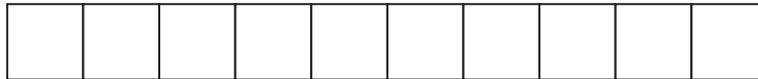
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1 (a) What fraction of this diagram is shaded?



(a) ..... [1]

(b) Shade 60% of the diagram below.



[1]

(c) Write the following as decimals.

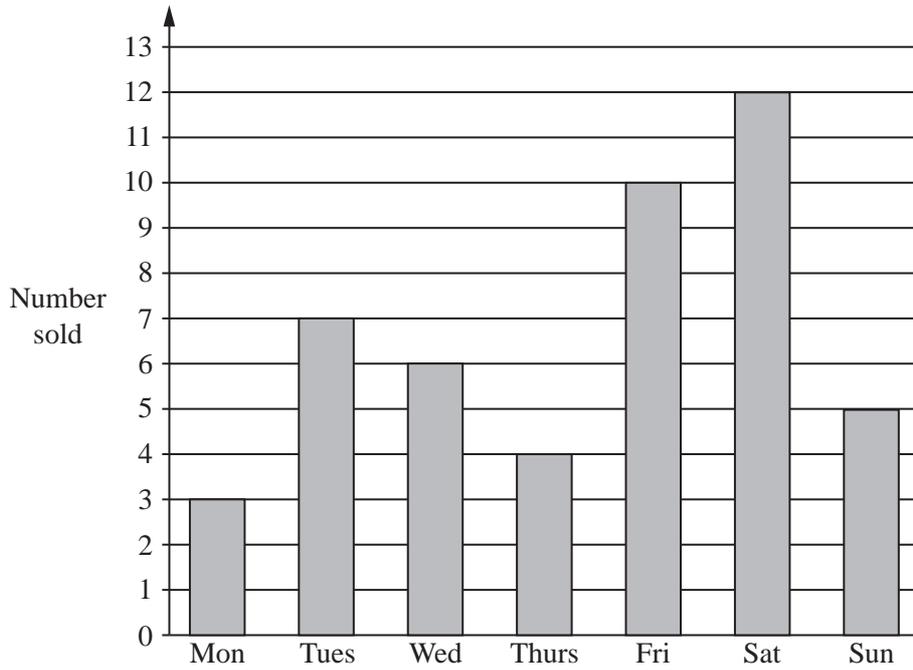
(i) 30%

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

(ii)  $\frac{3}{4}$

(ii) ..... [1]

2 The bar chart shows the number of Yummy Bars sold in a shop during one week.



(a) On which day was the largest number of Bars sold?

(a) ..... [1]

(b) How many Bars were sold in the whole week?

(b) ..... [2]

- (c) Each Yummy Bar contains a card with a joke (J), a riddle (R) or a picture (P).  
Two Bars are opened.

In the table below, list all possible pairs of cards.  
One pair has been done for you.  
You may not need all the rows.

First card	Second card
J	J

[2]

- 3 Use numbers from this list to complete the sentences below.

**5    8    9    12    21    30**

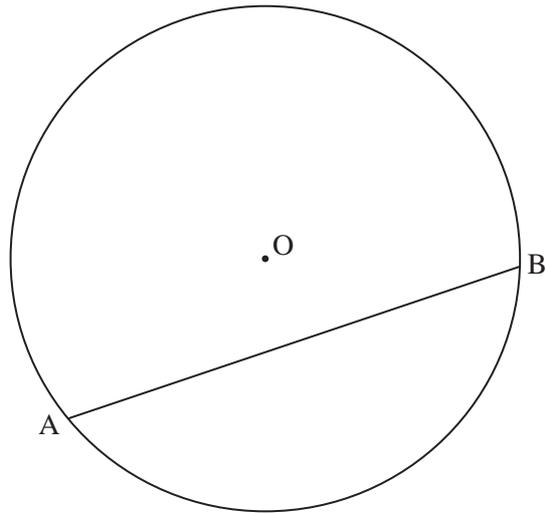
..... is a square number.

..... is a multiple of 7.

..... is a factor of 15.

[3]

4 The diagram shows a circle, centre O.

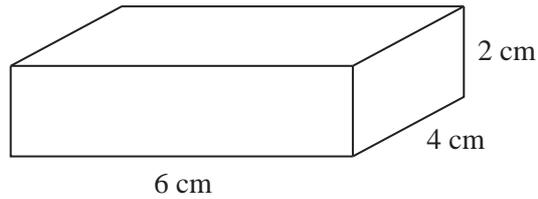


(a) Mark a point on the circumference and label it P. [1]

(b) Explain how you know that line AB is not a diameter of the circle.

..... [1]

- 5 A cuboid has a rectangular base, length 6 cm and width 4 cm.  
The height of the cuboid is 2 cm.



- (a) Work out the area of the base.

(a) .....cm<sup>2</sup> [2]

- (b) Work out the volume of the cuboid.  
Give the units of your answer.

(b) ..... [2]

- 6 Pete is going to drive 48 kilometres from Calais to Dunkirk.  
He knows that 8 km is about the same as 5 miles.

Use this information to work out the distance, in miles, from Calais to Dunkirk.

..... miles [2]

7 (a) Simplify the following.

(i)  $2f + 3f + 5f$

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

(ii)  $3b + 5c + 6b - 2c$

(ii)..... [2]

(b) Solve these equations.

(i)  $4x = 20$

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

(ii)  $x + 7 = 15$

(ii)..... [1]

(iii)  $2x - 5 = 6$

(iii)..... [2]

(c) Find the value of  $3t + 7x$  when  $t = 2$  and  $x = 5$ .

(c)..... [2]

8

Second hand cars  
Pay 20 % deposit  
Then the balance in 12 equal  
payments

Clive bought a car for £3000.

How much was each of the 12 payments?

£ ..... [5]

9 Express 40 as a product of prime factors.

..... [2]

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