

**GENERAL CERTIFICATE OF SECONDARY EDUCATION**  
**MATHEMATICS C (GRADUATED ASSESSMENT)**  
MODULE M3 – SECTION A

## B273A

Candidates answer on the question paper

**OCR Supplied Materials:**  
None

**Other Materials Required:**

- Geometrical instruments
- Tracing paper (optional)

**Monday 9 March 2009**  
**Morning**

**Duration: 30 minutes**



Candidate Forename		Candidate Surname	
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Centre Number						Candidate Number				
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**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 **8** pages. Any blank pages are indicated.

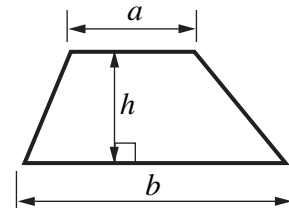
**WARNING**

No calculator can be used for Section A of this paper

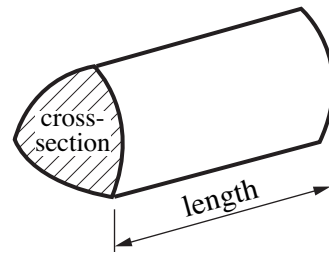
FOR EXAMINER'S USE	
<b>SECTION A</b>	
<b>SECTION B</b>	
<b>TOTAL</b>	

## Formulae Sheet

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



$$\text{Volume of prism} = (\text{area of cross-section}) \times \text{length}$$



**PLEASE DO NOT WRITE ON THIS PAGE**

1 Choose the most suitable quantity from this list to complete each sentence.

6 g	60 kg	6 km	6 cm	6 l
6 kg	600 g	6 m	60 m	6 ml

- (a) A 3-month-old baby weighs ..... [1]
- (b) An apple tree is ..... tall. [1]
- (c) The recommended maximum daily intake of salt for an adult is ..... [1]

2 Work out.

(a)  $4 + 6 \times 3$

(a) ..... [1]

(b)  $(19 - 4) \div (2 + 3)$

(b) ..... [2]

(c)  $5 \cdot 2 \times 3$

(c) ..... [1]

(d)  $8 \cdot 4 \div 4$

(d) ..... [1]

**3** Tina has £80 birthday money.

**(a)** Tina saves 25% of the £80.

How much does she save?

**(a)** £.....[2]

**(b)** Tina spends 10% of the £80 on a CD.

How much does she spend on the CD?

**(b)** £ .....[1]

**4** Solve.

**(a)**  $c + 7 = 15$

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

**(b)**  $5d = 45$

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

**(c)**  $30 - e = 24$

**(c)** .....[1]

5 (a) Write down the value of

(i)  $6^2$ ,

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

(ii)  $\sqrt{64}$ .

(ii) ..... [1]

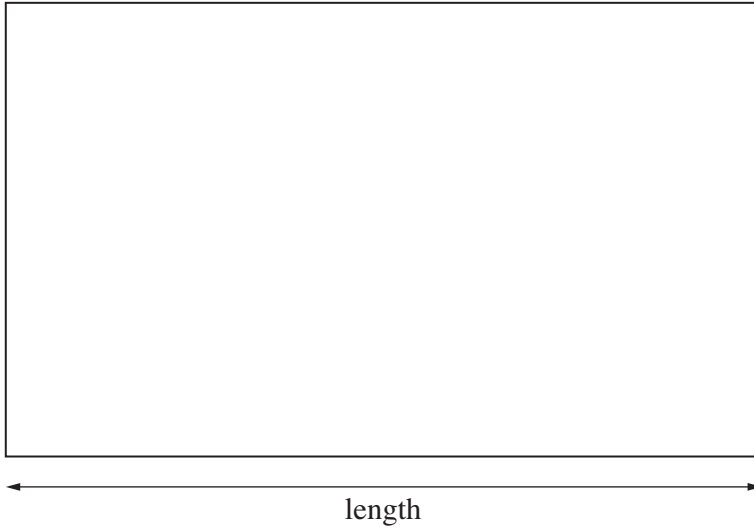
(b) Naseem says:

All square numbers are even.

Give an example to show that Naseem is wrong.

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

- 6 Kevin has started a scale drawing of a flag.  
It is drawn to a scale of **1 cm to 20 cm**.



- (a) What is the length of the **real** flag?  
Give your answer in metres.  
Show your working.

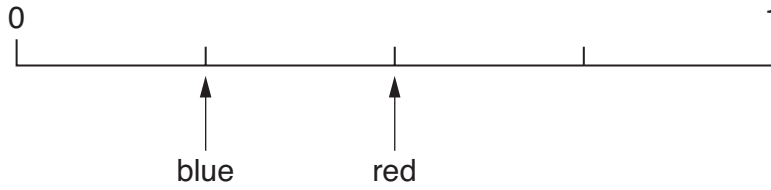
(a) .....m [3]

- (b) There is a circle on the real flag.  
The diameter of the real circle is 1 m.

What should the diameter of the circle be on Kevin's scale drawing?  
Give your answer in centimetres.

(b) .....cm [2]

- 7 A bag contains 20 counters.  
Each counter is coloured blue or red or green.



The arrows on the probability line show the probability of picking a blue counter and the probability of picking a red counter.

Work out how many counters of each colour there are in the bag.

..... blue counters

..... red counters

..... green counters **[3]**

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