

<b>Candidate Forename</b>		<b>Candidate Surname</b>	
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<b>Centre Number</b>						<b>Candidate Number</b>				
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**OXFORD CAMBRIDGE AND RSA EXAMINATIONS  
GENERAL CERTIFICATE OF SECONDARY EDUCATION**

**B276A**

**MATHEMATICS C  
(GRADUATED ASSESSMENT)**

**MODULE M6 – SECTION A**

**MONDAY 21 JUNE 2010: Afternoon**

**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)**

**WARNING**

**No calculator can be used for  
Section A of this paper.**

**READ INSTRUCTIONS OVERLEAF**

## **INSTRUCTIONS TO CANDIDATES**

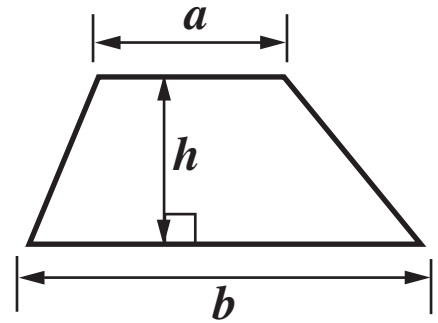
- **Write your name clearly in capital letters, your Centre Number and Candidate Number in the boxes on the first page.**
- **Use black ink. Pencil may be used for graphs and diagrams only.**
- **Read each question carefully and make sure that you know what you have to do before starting your answer.**
- **Show your working. Marks may be given for a correct method even if the answer is incorrect.**
- **Answer ALL the questions.**
- **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).**

## **INFORMATION FOR CANDIDATES**

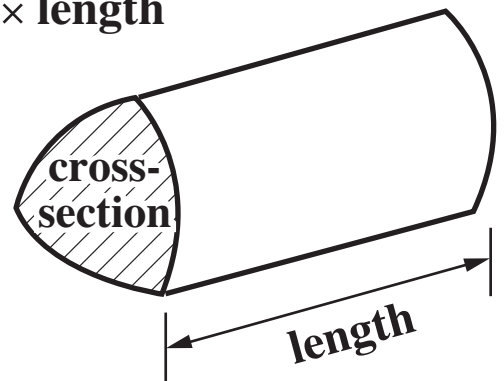
- **The number of marks is given in brackets [ ] at the end of each question or part question.**
- **The total number of marks for this Section is 25.**

## FORMULAE SHEET

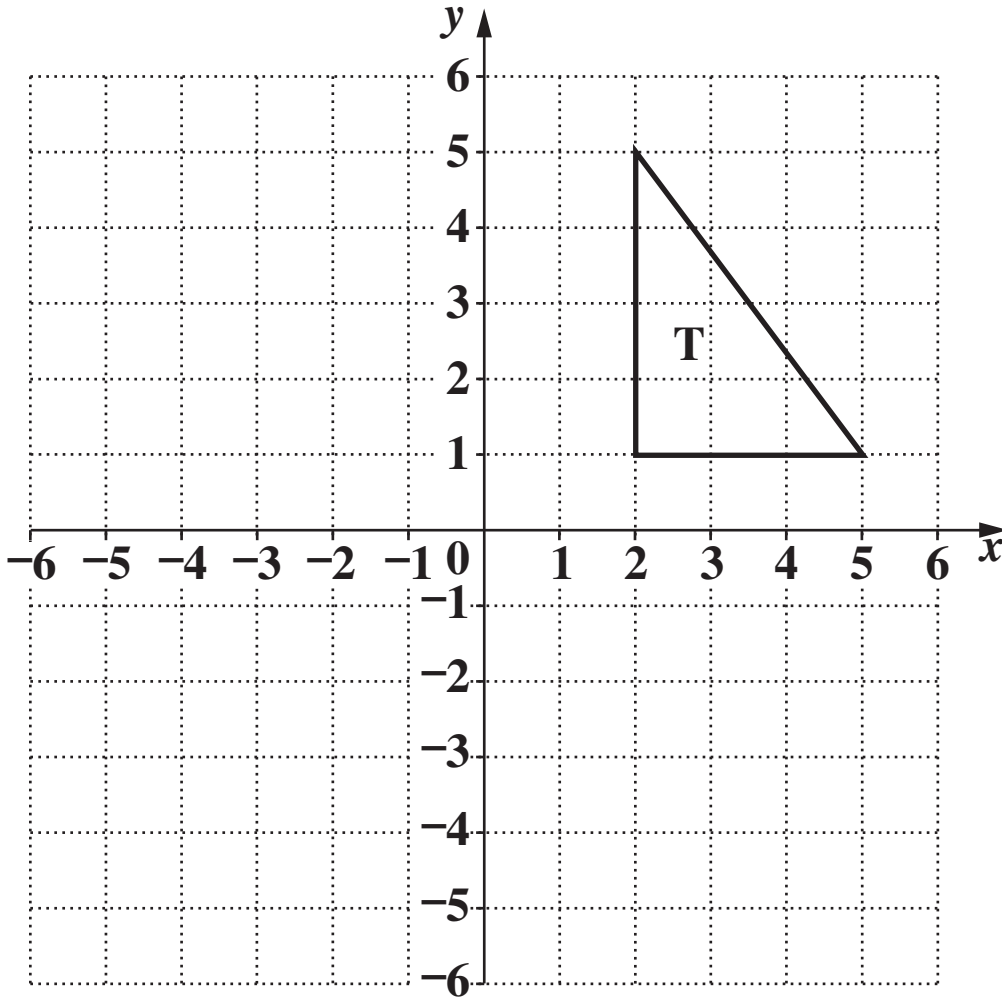
$$\text{Area of trapezium} = \frac{1}{2} (a + b)h$$



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



1



- (a) **Reflect triangle T in the  $x$ -axis.**  
**Label the image A.**  
**[1 mark]**
- (b) **Rotate triangle T through  $90^\circ$  anticlockwise about the origin.**  
**Label the image B.**  
**[3 marks]**

- 2 (a) Write  $\frac{7}{8}$  as a decimal.  
[2 marks]

(a) \_\_\_\_\_

- (b) Work out.

$$\frac{2}{5} \times \frac{1}{4}$$

Give your answer as a fraction in its simplest form.  
[2 marks]

(b) \_\_\_\_\_

- 3 (a) Work out the value of  $3x + 2$  when  $x = -4$ .  
[1 mark]**

**(a)** \_\_\_\_\_

- (b) Work out the value of  $2x^3 - 1$  when  $x = 2$ .  
[2 marks]**

**(b)** \_\_\_\_\_

- 4 (a) Terry uses a **BIASED** coin to play a game.  
The probability of getting 'Heads' is  $\frac{1}{5}$ .

What is the probability of getting 'Tails' for Terry's coin?  
[1 mark]

(a) \_\_\_\_\_

- (b) Terry also uses a biased four-sided dice.  
The probability of getting each number is given in the table.

<b>Number</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Probability</b>	<b>0.3</b>	<b>0.1</b>		<b>0.45</b>

Complete the table.  
[2 marks]

**5 (a) Anwar and Colin work out this sum.**

$$4 + 2 \times 3 =$$

**Anwar says the answer is 18.**

**Colin says the answer is 10.**

**Who is correct?**

**Give a reason.**

**[1 mark]**

**Write Anwar  
or Colin.**

\_\_\_\_\_ because \_\_\_\_\_  
\_\_\_\_\_

**(b) Work out.**

$$(14 - 6) \times 3^2$$

**[2 marks]**

**(b)** \_\_\_\_\_



**6 (a) Solve.**

$$4x - 3 = 27$$

[2 marks]

(a) \_\_\_\_\_

**(b) Solve.**

$$5x + 11 = 3x + 25$$

[3 marks]

(b) \_\_\_\_\_

- 7 In July, a sports club had 25 male members and some female members.  
By September the membership had increased to 48.  
In September the ratio of males to females was 5 : 1.**

**How many MORE male members were there in September than in July?  
[3 marks]**

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