

Candidate forename		Candidate surname	
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Centre number						Candidate number				
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**OXFORD CAMBRIDGE AND RSA EXAMINATIONS  
GENERAL CERTIFICATE OF SECONDARY EDUCATION**

**B273A**

**MATHEMATICS C  
(GRADUATED ASSESSMENT)**

**MODULE M3 – SECTION A**

**THURSDAY 20 JANUARY 2011: Morning**

**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**

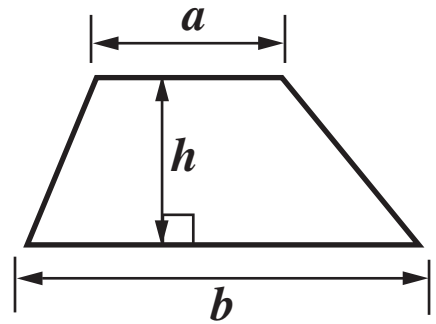
- **Write your name, centre number and candidate number in the boxes on the first page. Please write clearly and in capital letters.**
- **Use black ink. Pencil may be used for graphs and diagrams only.**
- **Read each question carefully. Make sure you know what you have to do before starting your answer.**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

## **INFORMATION FOR CANDIDATES**

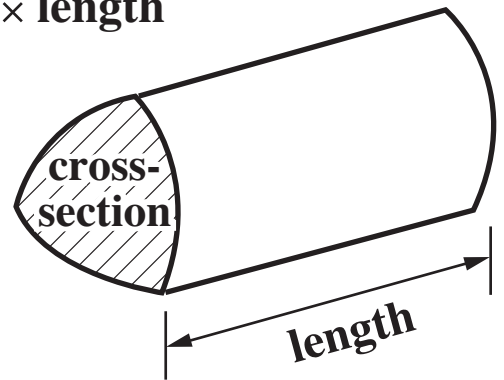
- **The number of marks is given in brackets [ ] at the end of each question or part question.**
- **The total number of marks for this Section is 25.**

# FORMULAE SHEET

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



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



**1 Work out.**

**(a)  $1.6 \times 100 =$  \_\_\_\_\_ [1]**

**(b)  $1478 \div 10 =$  \_\_\_\_\_ [1]**

**(c)  $128.7 \div 3 =$  \_\_\_\_\_ [1]**

**(d) Tom works out this sum.**

$$\begin{array}{r} 4.7 \\ \times 4 \\ \hline 16.28 \end{array}$$

**Tom's answer is wrong.**

**Explain his error.**

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**[1]**

- 2 (a) A cruise ship has 800 cabins.  
15% of the cabins have balconies.  
 $\frac{1}{4}$  of the CABINS WITH BALCONIES are for 4 people.**

**How many cabins have a balcony AND are for 4 people?**

**(a) \_\_\_\_\_ [3]**

- (b) The ship docked at 7 am.  
It sailed ten and a half hours later.**

**At what time did the ship sail?**

**(b) \_\_\_\_\_ [1]**

**(c) In a room on the ship there are:**

- **7 blue chairs,**
- **3 red chairs,**
- **6 green chairs.**

**Alison enters the room and sits on a chair at random.**

**What is the probability that Alison sits on a blue chair?**

**(c) \_\_\_\_\_ [2]**

**(d) A waiter on the ship opens a bottle containing 1 litre of water.**

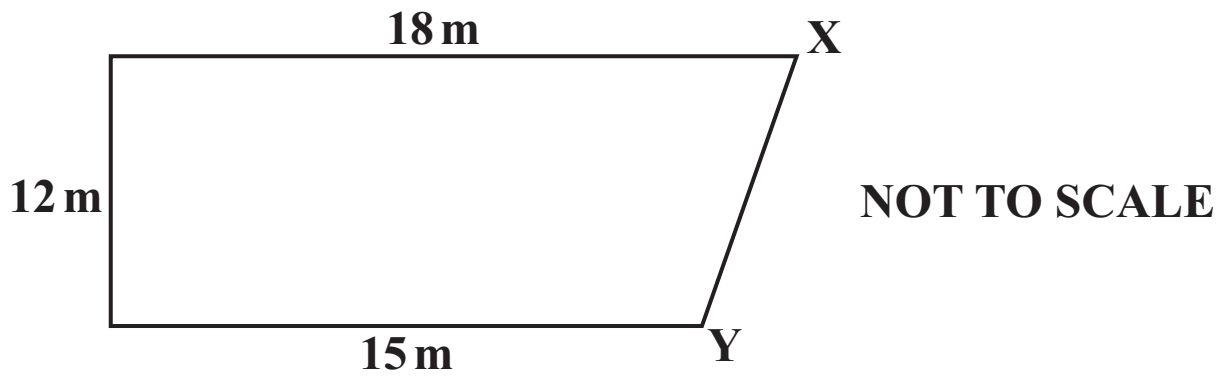
**He pours 300 ml of water into a glass.**

**How much water is left in the bottle?**

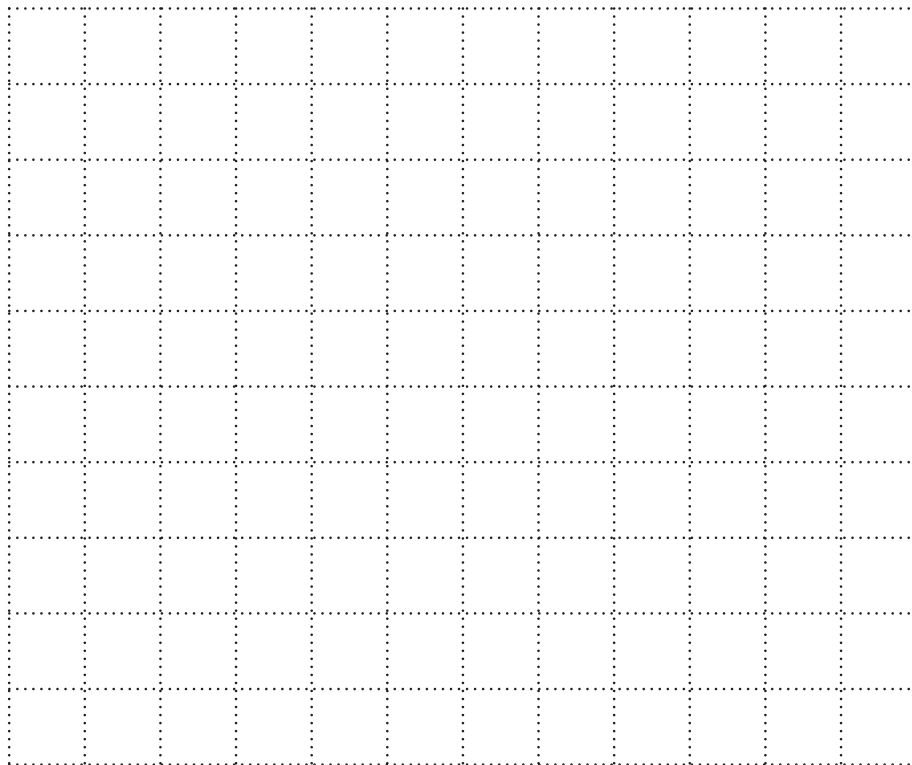
**Give the units of your answer.**

**(d) \_\_\_\_\_ [3]**

(e) This is a sketch of the ship's dining room.



(i) Make a scale drawing of the dining room.  
Use a scale of 1 cm to 2 m.



[2]



**(ii) Use your scale drawing to find the real length of the line XY.**

**(e)(ii) \_\_\_\_\_ m [2]**

**3 Solve.**

**(a)  $4 + x = 22$**

**(a) \_\_\_\_\_ [1]**

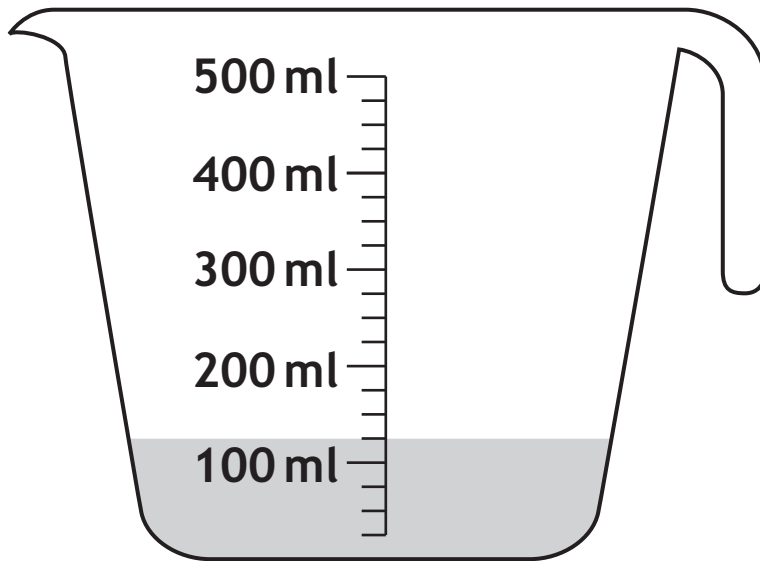
**(b)  $x - 7 = 19$**

**(b) \_\_\_\_\_ [1]**

**(c)  $x \div 3 = 2$**

**(c) \_\_\_\_\_ [1]**

4 (a) What measurement does this scale show?



(a) \_\_\_\_\_ ml [1]

(b) Draw an arrow on the number line at 2.7.



[1]

**5 Work out.**

**(a)  $(3 + 9) \times (6 - 1)$**

**(a) \_\_\_\_\_ [2]**

**(b) Here is a sum that Elle has done wrong.**

$$\begin{aligned} & 6 + 5 \times 3 - 2 \\ = & 11 \times 3 - 2 \\ = & 33 - 2 \\ = & 31 \end{aligned}$$

**Put a ring around Elle's mistake.  
Explain what she did wrong.**

\_\_\_\_\_  
\_\_\_\_\_ **[1]**

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