Candidate forename		Candidate surname	

Centre number						Candidate number				

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

DC (CW/SW) 11MEP01185 40853/1

INSTRUCTIONS TO CANDIDATES

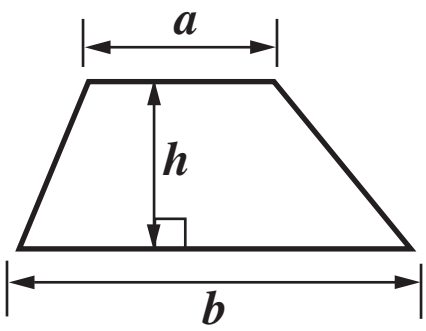
- **Write your name, centre number and candidate number in the boxes on the first page. Please write clearly and in capital letters.**
- **Use black ink. Pencil may be used for graphs and diagrams only.**
- **Read each question carefully. Make sure you know what you have to do before starting your answer.**
- **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

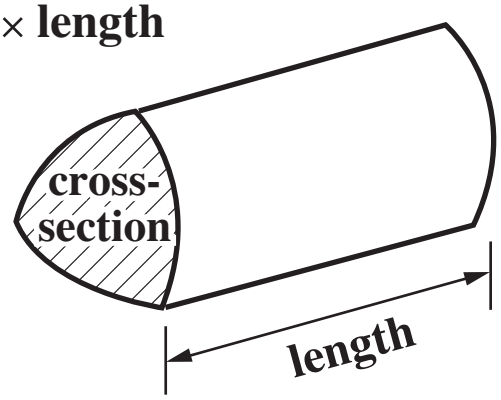
- **The number of marks is given in brackets [ ] at the end of each question or part question.**
- **The total number of marks for this Section is 25.**

FORMULAE SHEET

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



Volume of prism = (area of cross-section) × length



1 Work out.

(a) $1 \cdot 6 \times 100 =$ _____ **[1]**

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

(c) $128 \cdot 7 \div 3 =$ _____ **[1]**

(d) Tom works out this sum.

$$\begin{array}{r} 4{\cdot}7 \\ \times\ \ 4 \\ \hline 16{\cdot}28 \end{array}$$

Tom's answer is wrong.

Explain his error.

_____

_____ **[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?

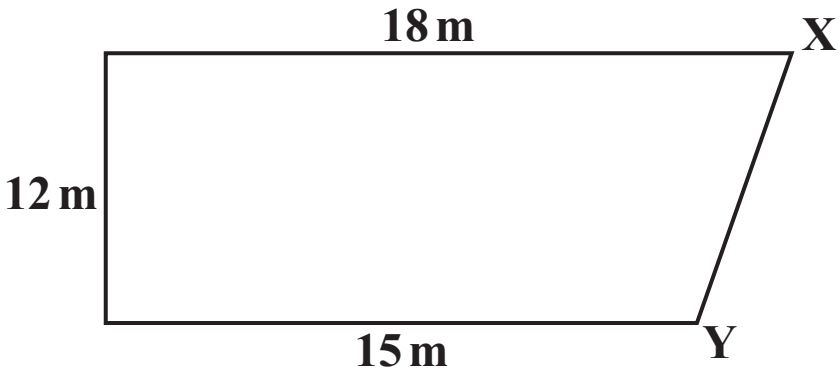
(c) _____ [2]

(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.

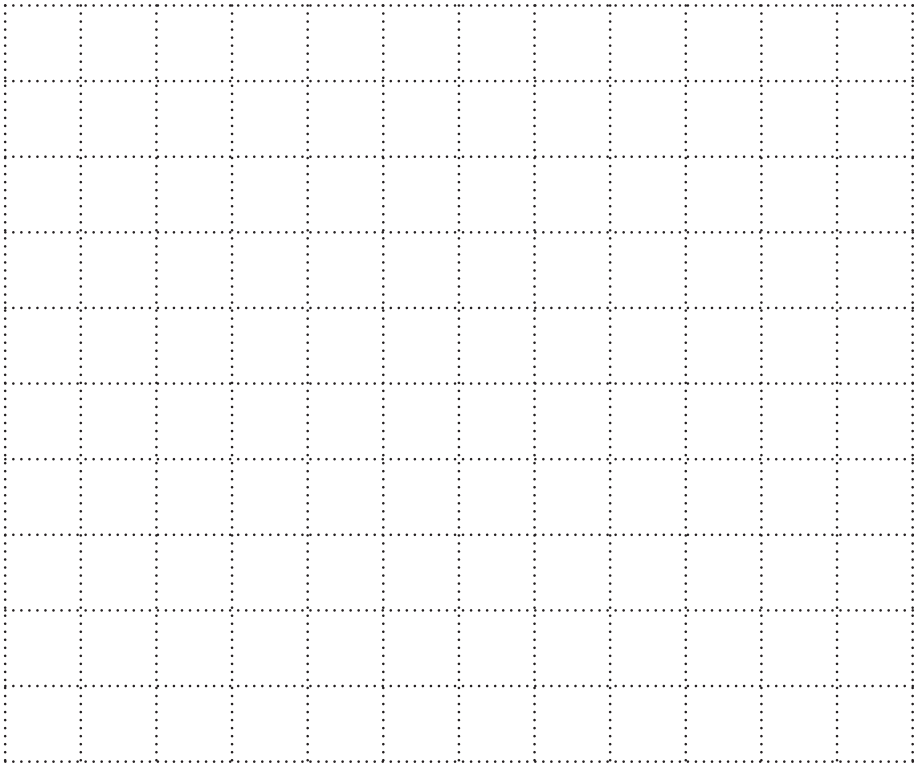
(d) _____ [3]

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



NOT TO SCALE

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



[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]

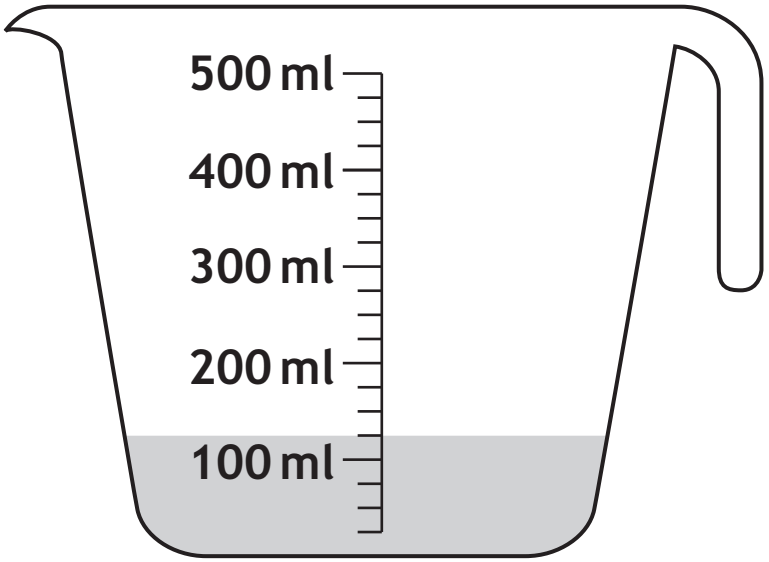
(b) $x - 7 = 19$

(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.

```
    6 + 5 × 3 - 2
=     11 × 3 - 2
=        33 - 2
=           31
```

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

_____

_____ **[1]**

BLANK PAGE

BLANK PAGE