



M3

**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)

**Thursday 20 January 2011
Morning**

Duration: 30 minutes



Candidate forename		Candidate surname	
--------------------	--	-------------------	--

Centre number						Candidate number				
---------------	--	--	--	--	--	------------------	--	--	--	--

MODIFIED LANGUAGE

INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above. 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.
- Do **not** write in the bar codes.

INFORMATION FOR CANDIDATES

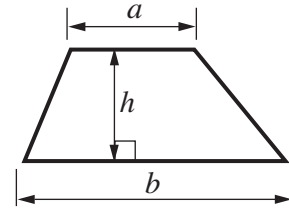
- The number of marks is given in brackets [] at the end of each question or part question.
- The total number of marks for this Section is **25**.
- This document consists of **8** pages. Any blank pages are indicated.

WARNING

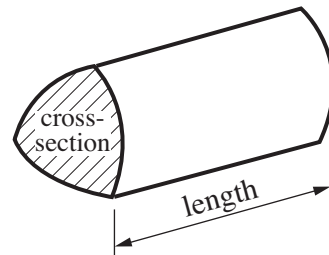
No calculator can be used for Section A of this paper

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 Work out.

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

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

(c) $128.7 \div 3 = \dots\dots\dots$ [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.

.....
 [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?

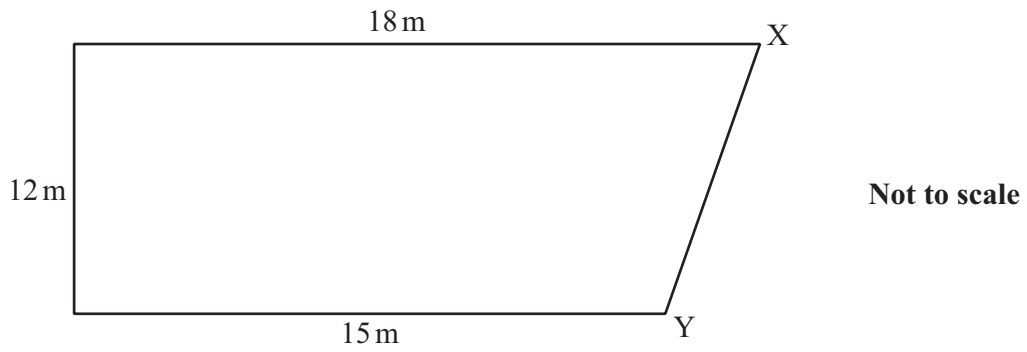
(c) [2]

- (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]

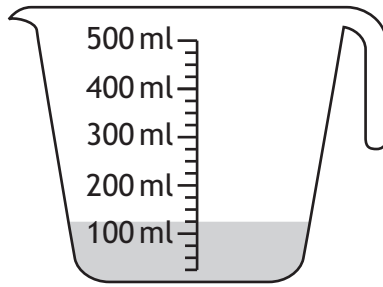
(b) $x - 7 = 19$

(b).....[1]

(c) $x \div 3 = 2$

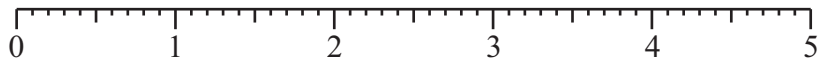
(c).....[1]

4 (a) How much liquid is in the jug?



(a).....ml [1]

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



[1]

TURN OVER FOR QUESTION 5

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]

Copyright Information

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website (www.ocr.org.uk) after the live examination series. If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact the Copyright Team, First Floor, 9 Hills Road, Cambridge CB2 1GE.

OCR is part of the Cambridge Assessment Group; Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.