

**GENERAL CERTIFICATE OF SECONDARY EDUCATION
 MATHEMATICS C (GRADUATED ASSESSMENT)
 MODULE M4 – SECTION A**

M4

MONDAY 21 JANUARY 2008

Morning
 Time: 30 minutes

Candidates answer on the question paper
Additional materials: Geometrical instruments
 Tracing paper (optional)



Candidate Forename

Candidate Surname

Centre Number

Candidate Number

INSTRUCTIONS TO CANDIDATES

- Write your name in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use blue or 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.
- Do **not** write outside the box bordering each page.
- Write your answer to each question in the space provided.

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.



WARNING

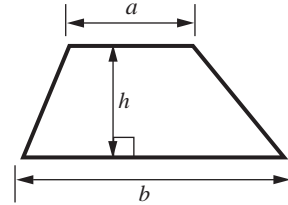
You are not allowed to use a calculator in Section A of this paper.

FOR EXAMINER'S USE	
SECTION A	
SECTION B	
TOTAL	

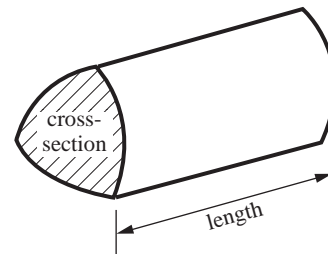
This document consists of **8** printed pages.

Formulae Sheet

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



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



PLEASE DO NOT WRITE ON THIS PAGE

1 Complete these statements.

The fraction $\frac{3}{10}$ is the same as the decimal

The fraction is the same as 39%.

[2]

2	

2 (a) Here are the first four terms of a sequence.

14 11 8 5

(i) Describe the rule for continuing this sequence.

..... [1]

(ii) Work out the next two terms of this sequence.

(a)(ii) , [2]

(b) The first term of another sequence is 6.
The rule for continuing this sequence is

Divide by 2 to find the next term.

Work out the next two terms of this sequence.

6

[2]

5	

3 (a) Choose **from this list** to complete these sentences.

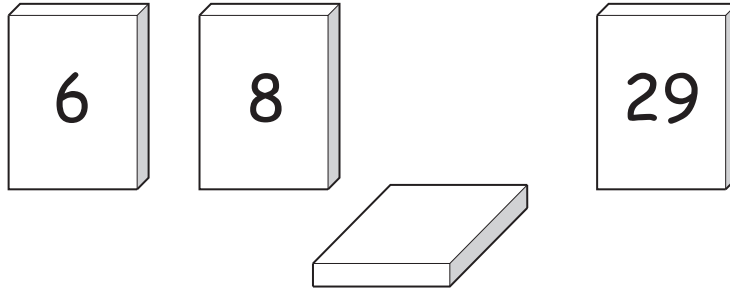
4 5 9 15 36 40

..... is a multiple of 10.

..... is a factor of 18.

[2]

(b) Here are four number cards.
One card is face down so that the number is hidden.



The four numbers are in order of size.

The hidden number is

- a factor of 30,
- a multiple of 3.

What is the hidden number?

(b) [2]

4	
---	--

4 This is part of a recipe for Gooseberry Fool.

GOOSEBERRY FOOL	
serves 4	
450 g	Gooseberries
2 tablespoons	Sugar
150 ml	Cream

(a) Ruth makes Gooseberry Fool for 2 people.

How much Cream does she need?

(a) ml [1]

(b) Alison makes Gooseberry Fool for 20 people.

Complete this list.

GOOSEBERRY FOOL	
serves 20	
..... g	Gooseberries
..... tablespoons	Sugar
..... ml	Cream

[2]

(c) Gerald has 1200 g of Gooseberries.

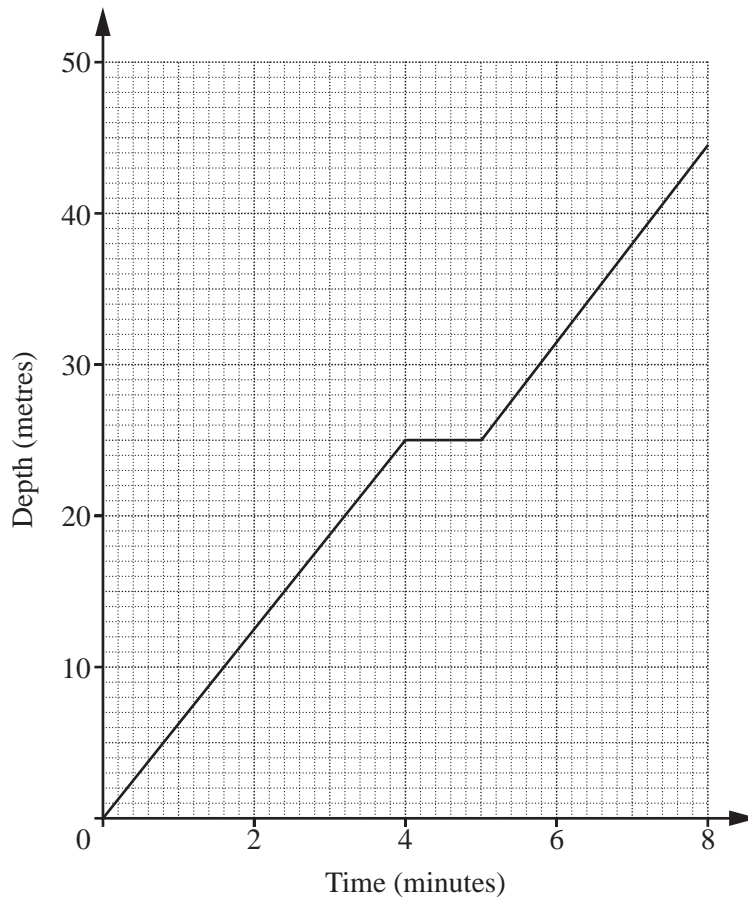
Is this enough to make Gooseberry Fool for 12 people?
Explain your answer.

..... because

..... [1]

4

5 This graph shows the depth of a submarine as it dives.



(a) How deep was the submarine after 6 minutes?

(a)..... m [1]

(b) What happened between 4 and 5 minutes?

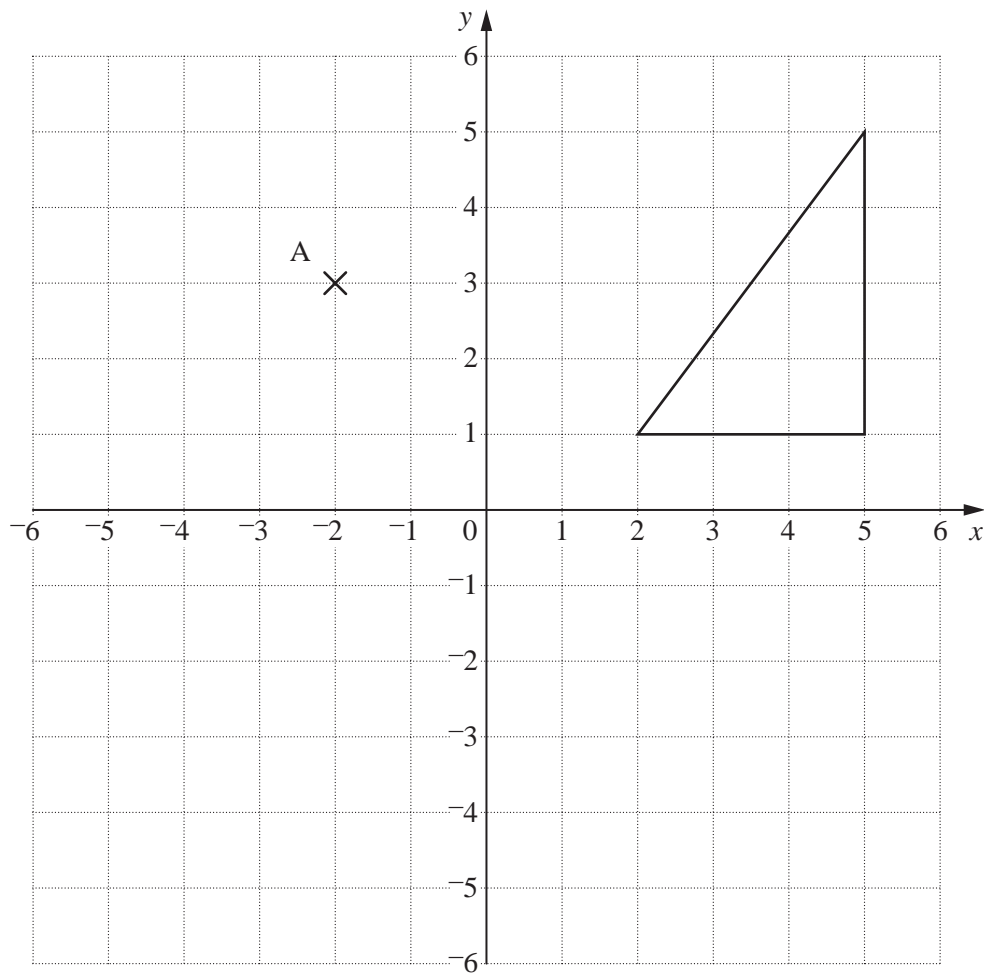
.....
 [1]

(c) How long did the submarine take to reach a depth of 38 metres?

(c) minutes [1]

3

6 Here is a triangle drawn on a centimetre square grid.



(a) Reflect the triangle in the x -axis. [1]

(b) (i) Write down the coordinates of the point A.

(b)(i) (.....,) [1]

(ii) Plot the point $(-4, -1)$.
Label it B. [1]

(iii) ABC is a right-angled triangle.
Plot point C and join the points A, B and C to complete the triangle.

Write down the coordinates of point C.

(iii) (.....,) [2]

5

TURN OVER FOR QUESTION 7

- 7 A box contains 10 milk chocolates, 8 plain chocolates and 6 white chocolates. Liam takes a chocolate from the box without looking.

Show that the probability that he takes a white chocolate is $\frac{1}{4}$.

.....

.....

..... [2]

2

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