



M6

GENERAL CERTIFICATE OF SECONDARY EDUCATION
MATHEMATICS C (GRADUATED ASSESSMENT)
 MODULE M6 – SECTION B

B276B

Candidates answer on the question paper.

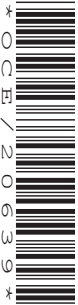
OCR supplied materials:
None

Other materials required:

- Geometrical instruments
- Tracing paper (optional)
- Scientific or graphical calculator

Thursday 20 January 2011
Morning

Duration: 30 minutes



Candidate forename		Candidate surname	
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Centre number							Candidate number				
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INSTRUCTIONS TO CANDIDATES

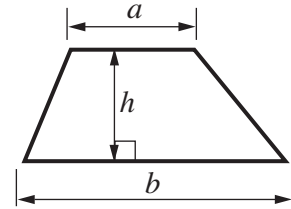
- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Show your working.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

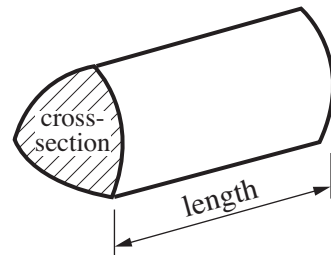
- The number of marks is given in brackets [] at the end of each question or part question.
- Section B starts with question 8.
- You are expected to use a calculator in Section B of this paper.
- Use the π button on your calculator or take π to be 3.142 unless the question says otherwise.
- The total number of marks for this Section is **25**.
- This document consists of **8** pages. Any blank pages are indicated.

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

- 8 This stem and leaf diagram shows the times, in seconds, taken by 25 athletes to run 200 m.

19	5	8	9			
20	6	6	8	9		
21	2	3	4	4	4	
22	1	5	5	6	8	9 9
23	3	4	6	8	8	
24	4					

Key: 21 | 3 = 21.3

For these times, find

- (a) the mode,

(a) s [1]

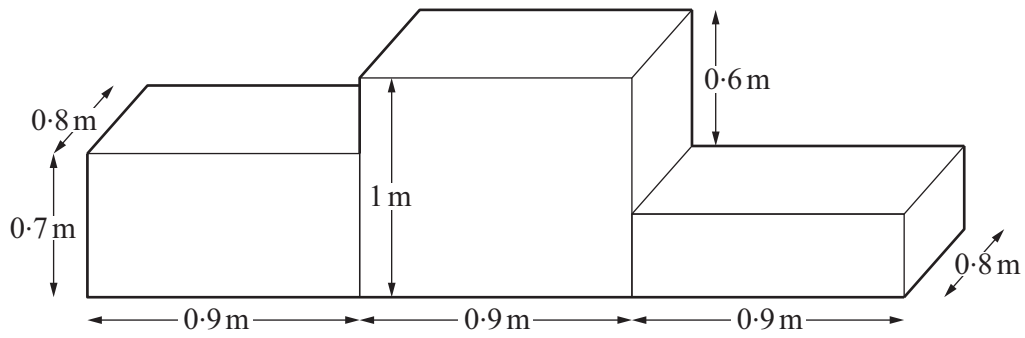
- (b) the range,

(b) s [1]

- (c) the median.

(c) s [1]

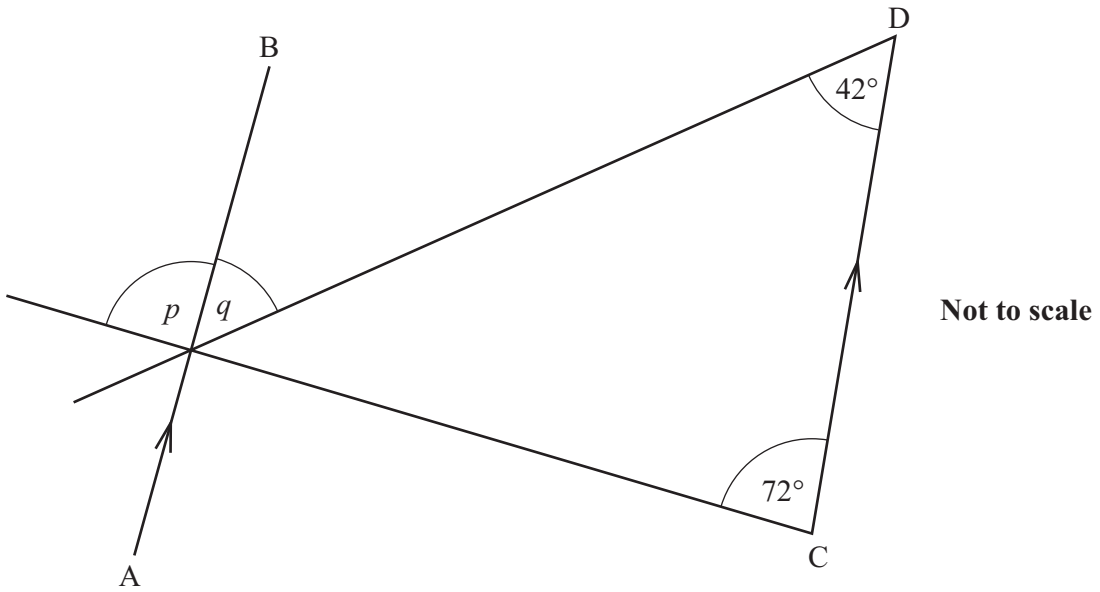
- 9 The diagram shows three cuboids that are used as platforms for the medal ceremonies in the Olympic games.



Calculate the total volume of the cuboids.
Give the units of your answer.

..... [5]

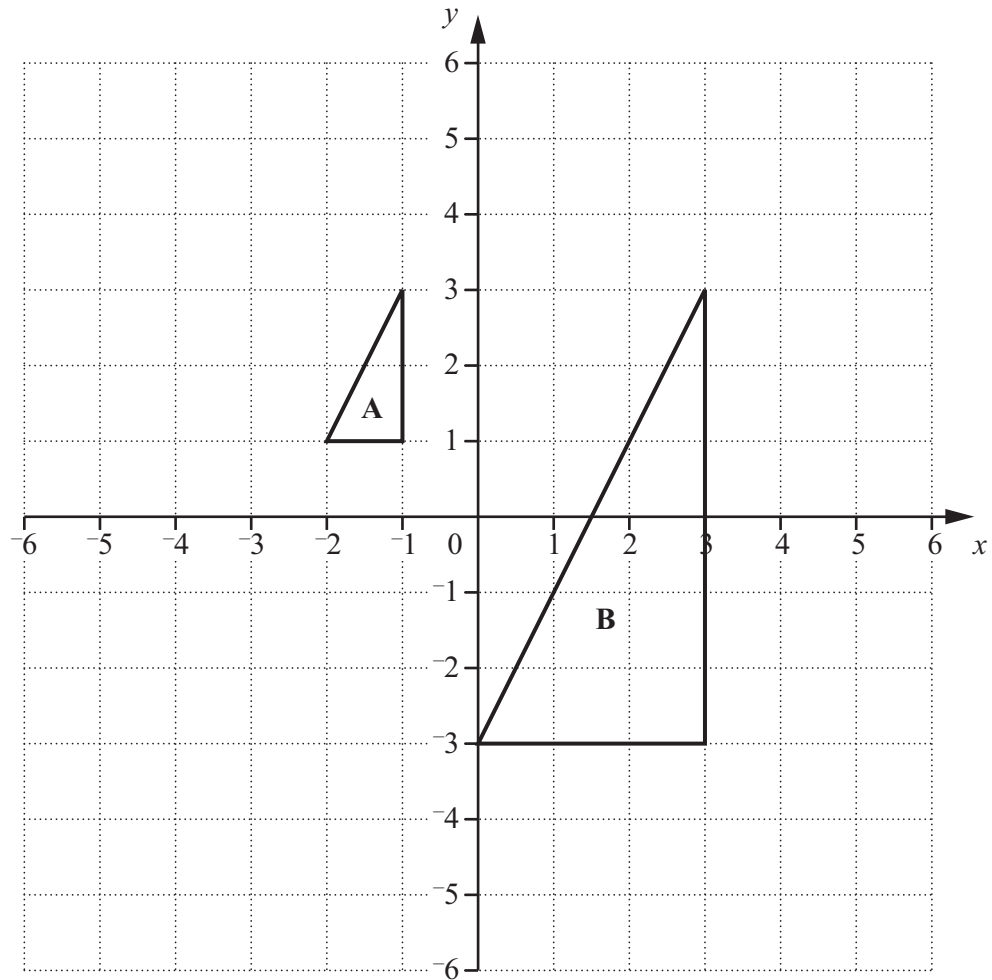
10 In the diagram, AB is parallel to CD.



Find angles p and q , giving a reason for each answer.

(a) $p = \dots\dots\dots^\circ$ because $\dots\dots\dots$
 $\dots\dots\dots$ [2]

(b) $q = \dots\dots\dots^\circ$ because $\dots\dots\dots$
 $\dots\dots\dots$ [2]



- (a) Complete the sentence below.

Triangle **A** is mapped onto triangle **B** by an enlargement
with scale factor and centre (..... ,).

[2]

- (b) Draw the reflection of triangle **A** in the line $x = -3$.
Label the image **C**.

[2]

12 Solve.

(a) $7x - 6 = 5x + 11$

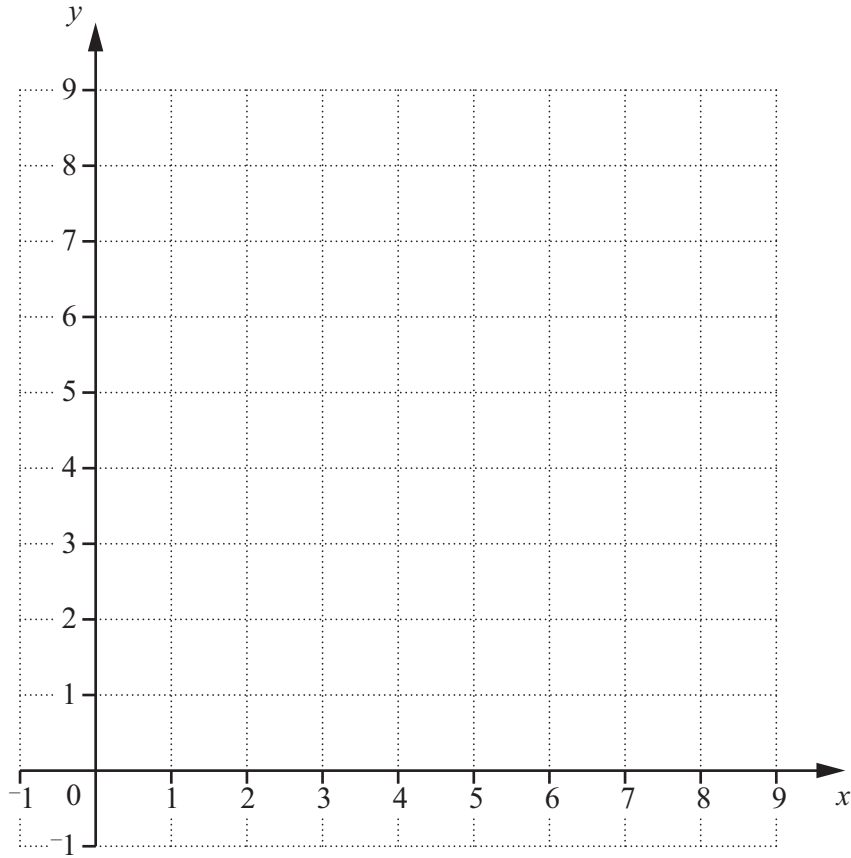
(a) [3]

(b) $3(4x - 1) = 27$

(b) [3]

TURN OVER FOR QUESTION 13

13 On the grid below, draw the graph of $x + y = 8$.



[3]

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