Candidate forename		Candidate surname	

Centre number						Candidate number				

OXFORD CAMBRIDGE AND RSA EXAMINATIONS
GENERAL CERTIFICATE OF SECONDARY EDUCATION

B276B

MATHEMATICS C (GRADUATED ASSESSMENT)

MODULE M6 – SECTION B

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)
Scientific or graphical calculator

READ INSTRUCTIONS OVERLEAF

DC (NH/SW) 11MEP01192 40864/1

INSTRUCTIONS TO CANDIDATES

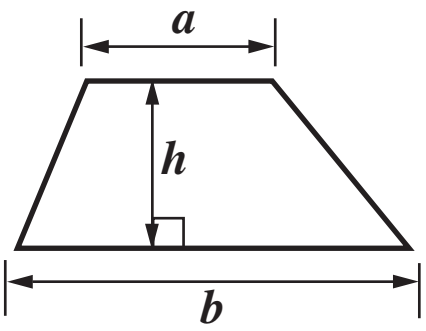
- **Write your name, centre number and candidate number in the boxes on the first page. Please write clearly and in capital letters.**
- **Use black ink. Pencil may be used for graphs and diagrams only.**
- **Read each question carefully. Make sure you know what you have to do before starting your answer.**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

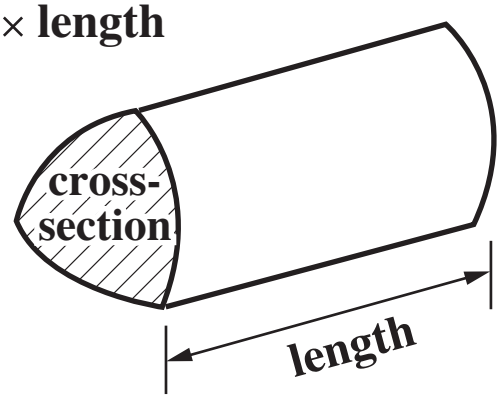
- **The number of marks is given in brackets [ ] at the end of each question or part question.**
- **Section B starts with question 8.**
- **You are expected to use a calculator in Section B of this paper.**
- **Use the π button on your calculator or take π to be 3·142 unless the question says otherwise.**
- **The total number of marks for this Section is 25.**

Formulae Sheet

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



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



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]

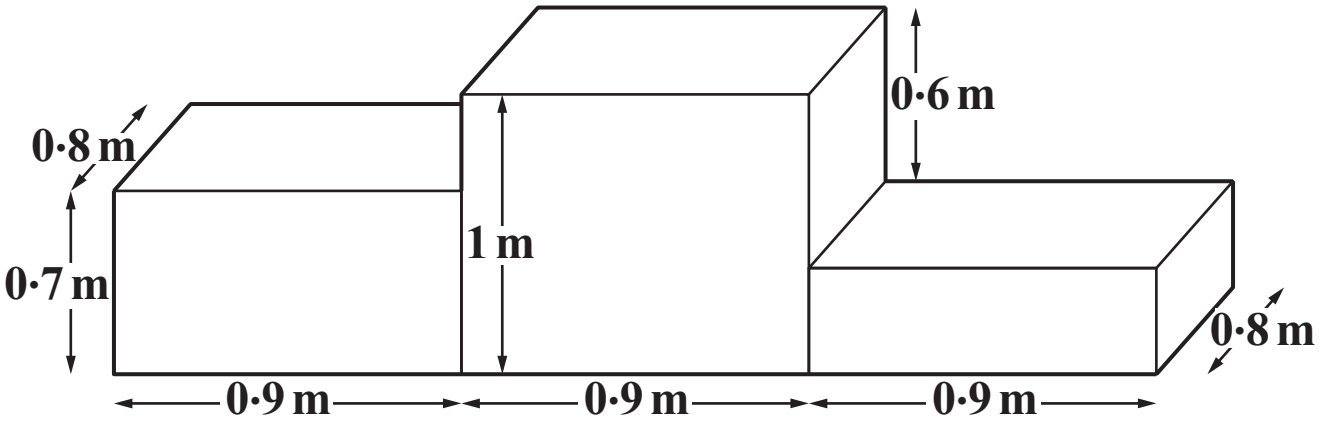
(b) the range,

(b) _____ s [1]

(c) the median.

(c) _____ s [1]

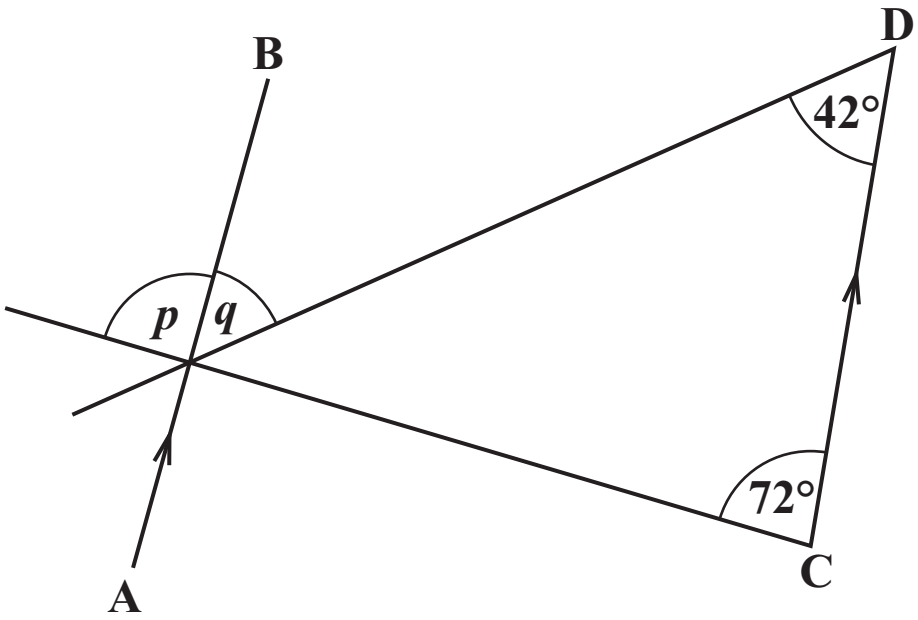
9 The diagram shows three cuboids that are used as platforms for the medal ceremonies in the Olympic games.



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

_____ **[5]**

10 In the diagram, AB is parallel to CD.



NOT TO SCALE

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

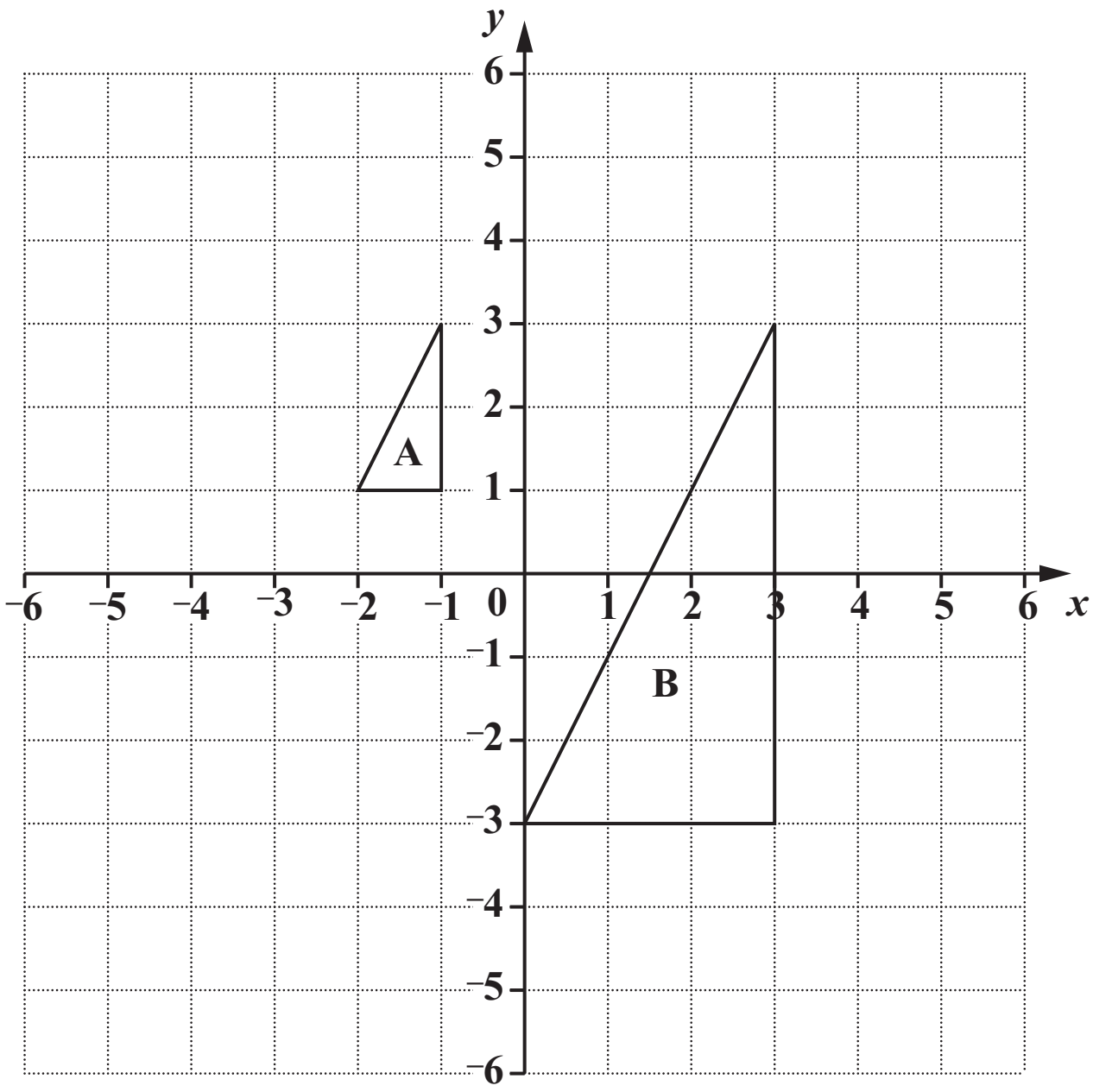
(a) $p =$ _____° **because** _____

_____ **[2]**

(b) $q =$ _____° **because** _____

_____ **[2]**

11 Triangles A and B are drawn on a coordinate grid.



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

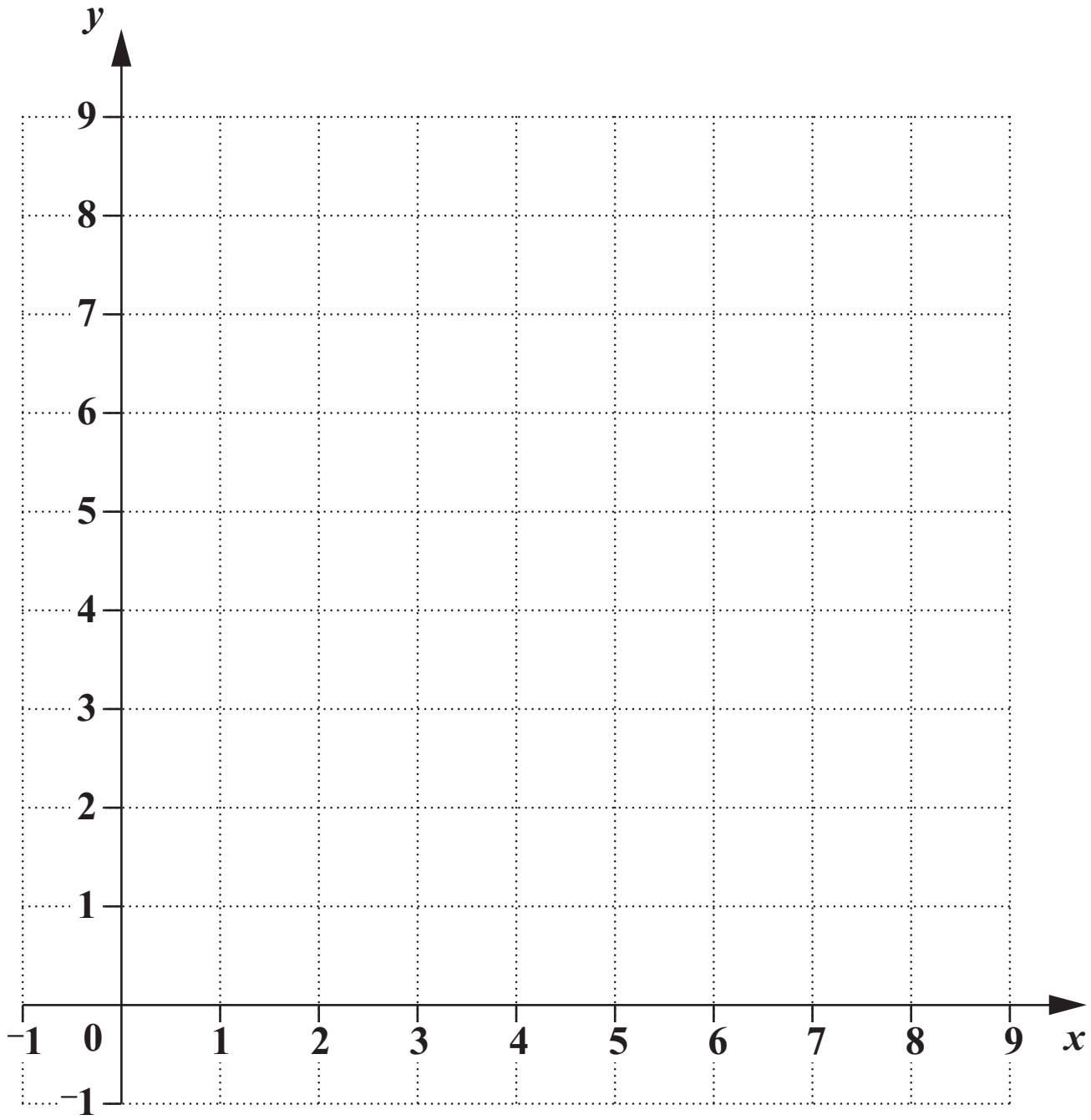
(a) _____ [3]

(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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