

**GENERAL CERTIFICATE OF SECONDARY EDUCATION
 MATHEMATICS B (MEI)**

B261B

Paper 1 Section B (Foundation Tier)

THURSDAY 10 JANUARY 2008

Morning
 Time: 45 minutes

Candidates answer on the question paper

Additional materials: Geometrical instruments
 Scientific or graphical calculator
 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

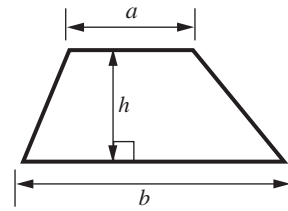
- The number of marks is given in brackets [] at the end of each question or part question.
- The total number of marks for this Section is **36**.
- Section B starts with question 10.
- You are expected to use a calculator in Section B of this paper.
- Use the π button on your calculator or take π to be 3.142 unless the question says otherwise.

FOR EXAMINER'S USE	
SECTION B	

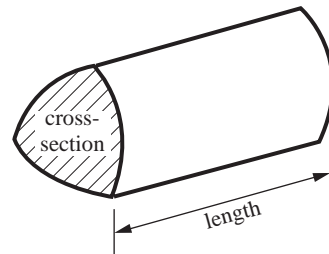
This document consists of **11** printed pages and **1** blank page.

Formulae Sheet: Foundation Tier

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



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



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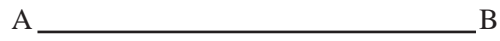
- 10 (a) (i) Measure the line below, accurately.
Write your answer in centimetres.



(a)(i)..... cm [1]

- (ii) Mark the midpoint of the line above and label it M. [1]

- (b) (i) Draw a line parallel to the line AB.



[1]

- (ii) Draw a line perpendicular to the line CD.



[1]

11 The time to slow-roast a joint of mutton can be found using this rule.

1 hour per kilogram
then an extra
30 minutes

(a) How long would it take to slow-roast a joint of mutton weighing 2 kilograms?

(a)hoursminutes [1]

(b) A joint of mutton takes 4 hours to slow-roast.

How much does it weigh?

(b)kg [2]

12 Tara has end of term tests in nine subjects.

These are her marks.

12 35 25 37 11 48 47 13 24

For these marks work out

(a) the median,

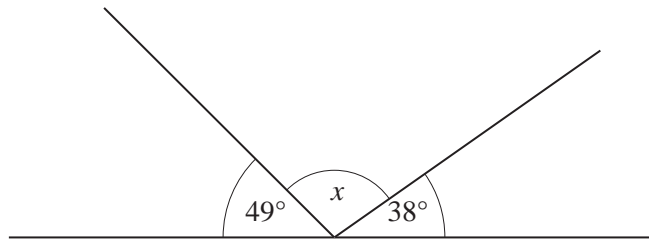
(a)..... [2]

(b) the mean.

(b) [3]

13 (a)

Not to scale

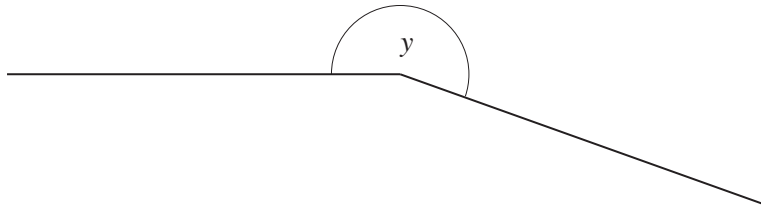


Work out angle x and give a reason for your answer.

$x = \dots\dots\dots^\circ$. Reason $\dots\dots\dots$
 $\dots\dots\dots$ [2]

(b) Choose one word from this list to describe angle y in the diagram below.
 Give a reason for your answer.

Acute	Reflex	Right	Obtuse
--------------	---------------	--------------	---------------



$\dots\dots\dots$ angle. Reason $\dots\dots\dots$
 $\dots\dots\dots$ [2]

14 (a) (i) Calculate 1.54^2 .

Write down all the numbers on your calculator display.

(a)(i)..... [1]

(ii) Give your answer correct to 2 decimal places.

(ii)..... [1]

(b) Calculate $\frac{1}{0.25^2}$.

(b) [2]

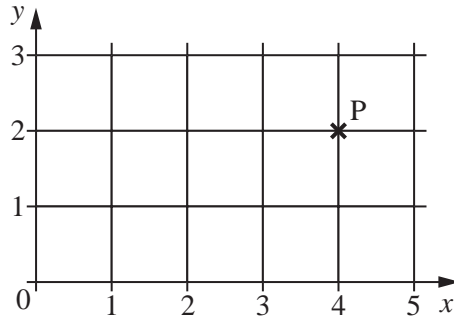
(c) Calculate $\frac{694.8}{93.5 - 31.8}$.

Give your answer correct to 1 significant figure.

(c)..... [2]

(d) Calculate the reciprocal of 0.8.

(d) [1]



(a) Write down the coordinates of the point P.

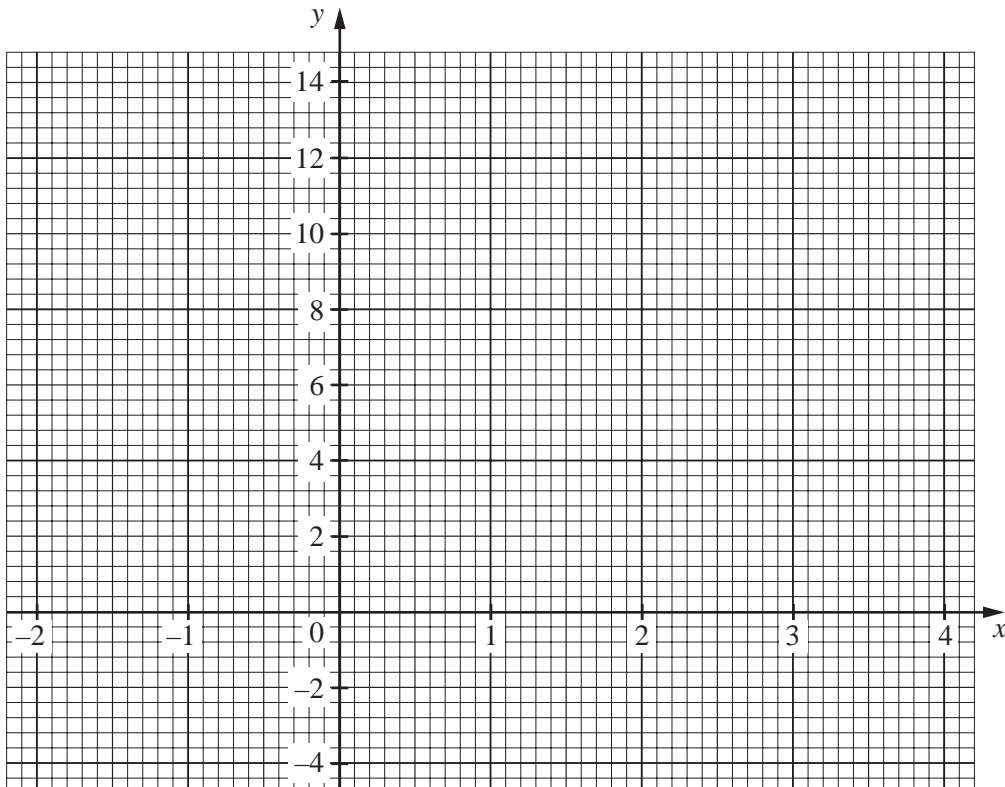
(a) (..... ,) [1]

(b) (i) Complete the table below for $y = 3x + 2$.

x	-2	1	4
y	-4		

[1]

(ii) On the grid below draw the graph of $y = 3x + 2$.



[2]



Tessa bought broccoli and tomatoes at a shop.

Her bill is shown below.

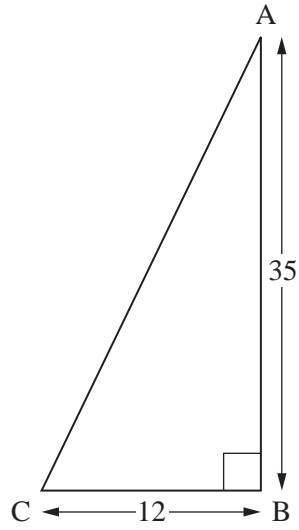
Fill in the three missing amounts.

Shopping Bill		
	£	p
0.75 kg broccoli @ £1.16 per kg	•
1.5 kg tomatoes @ £.....per kg	•
TOTAL	3	• 72

[4]

TURN OVER FOR QUESTION 17

- 17 ABC is a right-angled triangle.
 AB = 35 cm and BC = 12 cm.



Not to scale

- (a) Find the area of the triangle.

(a).....cm² [2]

- (b) Calculate the length AC.

(b) cm [3]

11
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