

GENERAL CERTIFICATE OF SECONDARY EDUCATION
MATHEMATICS B (MEI)
PAPER 1 SECTION A
FOUNDATION TIER
MONDAY 4 JUNE 2007

F B261A

Afternoon

Time: 45 minutes

Additional materials: Geometrical instruments
Tracing paper (optional)



* G U E / T 3 7 1 3 7 *

Candidate
Name

Centre
Number

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Candidate
Number

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INSTRUCTIONS TO CANDIDATES

- Write your name, centre number and candidate number in the boxes above.
- Answer **all** the questions.
- Use blue or black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure you know what you have to do before starting your answer.
- Show all your working. Marks may be given for working which shows that you know how to solve the problem, even if you get the answer wrong.
- Do **not** write in the bar code.
- Do **not** write outside the box bordering each page.
- WRITE YOUR ANSWER TO EACH QUESTION IN THE SPACE PROVIDED. ANSWERS WRITTEN ELSEWHERE WILL NOT BE MARKED.

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.



WARNING

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

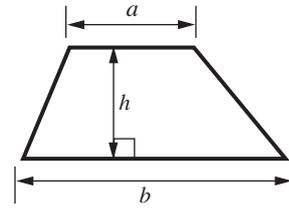
FOR EXAMINER'S USE

Section A	
Section B	
Total	

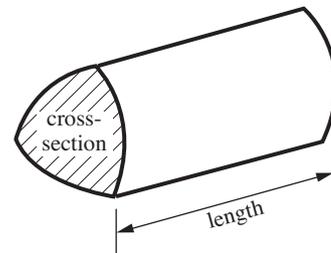
This document consists of **12** printed pages.

Formulae Sheet: Foundation Tier

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 Tom recorded the number of tickets he sold for a school disco. Here is his tally chart.

Day	Tally	Frequency
Monday		10
Tuesday		
Wednesday		
Thursday		
Friday		15

- (a) Complete the frequency column. [1]
- (b) Complete the pictogram for these data. Monday and Wednesday have been done for you.

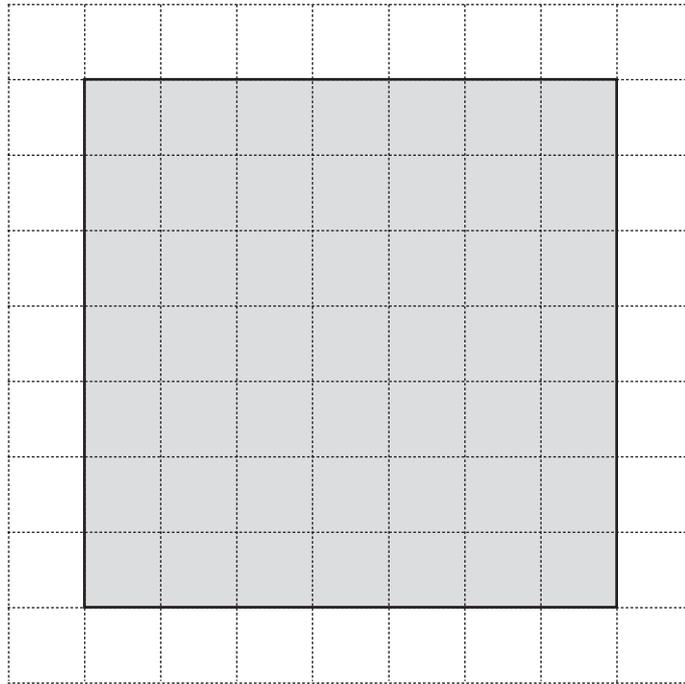
= 10 tickets

Monday	<input type="text"/>
Tuesday	
Wednesday	<input type="text"/> <input type="text"/> <input type="text"/>
Thursday	
Friday	

- (c) On which day did Tom sell twice as many tickets as Monday?

(c) [1]

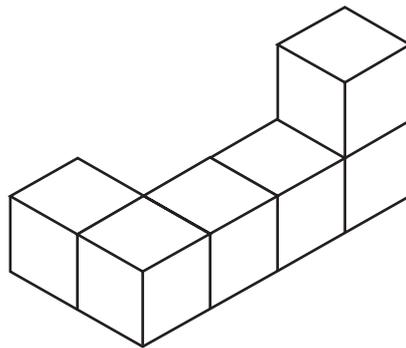
- 2 (a) This square is drawn on a centimetre squared grid.



Find the area of the square.

(a)cm² [1]

- (b) This solid is made from one-centimetre cubes.



Write down the volume of the solid.

(b)cm³ [1]

(c) Each shape shown below is made from 5 cubes.

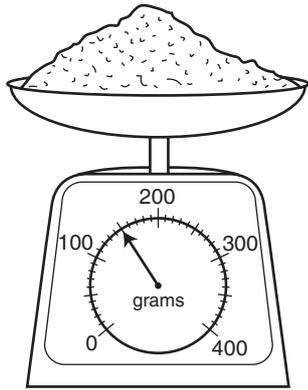
Join each shape to its front view with a line.
One has been done for you.

Shape	Front view

[4]

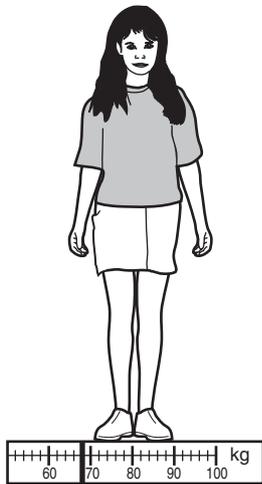
3 (a) Write down the values shown on these scales.

(i)



(a)(i) g [1]

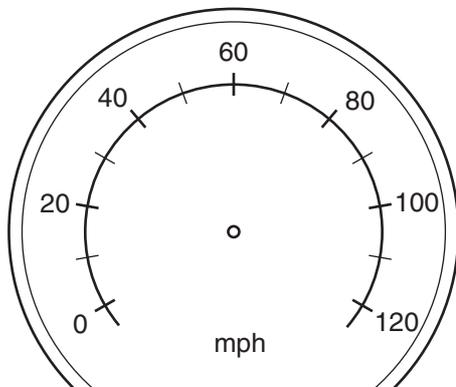
(ii)



(ii) kg [1]

(b) A car is travelling at 55 mph.

Draw an arrow on the speedometer to show this speed.



[1]

4 Work out.

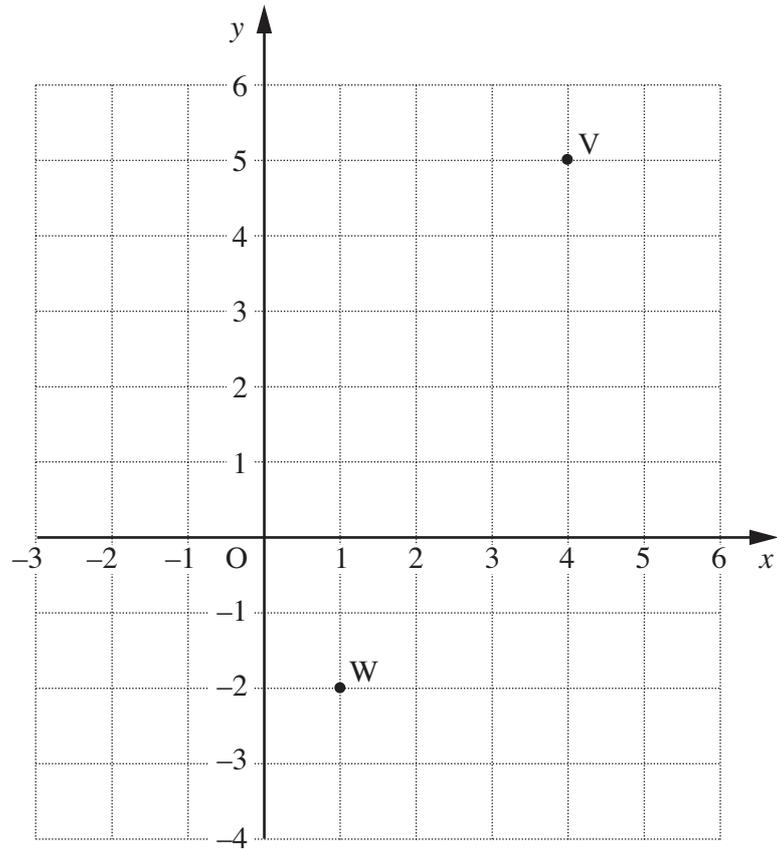
(a) $\frac{3}{8}$ of 56

(a) [2]

(b) 482×35

(b) [3]

5



(a) Write down the coordinates of the points V and W.

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

W(..... ,)[1]

(b) Plot the point $(-2, -3)$ and label it Z.

[1]

6 (a) Work out.

(i) 0.4×0.2

(a)(i) [1]

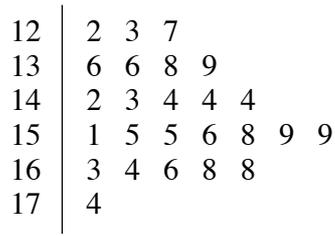
(ii) $4.2 - 1.72$

(ii) [1]

(b) Convert $\frac{9}{25}$ to a percentage.

(b)% [2]

7 This stem and leaf diagram shows the times, in seconds, taken to run 100 m by 25 students.



Key 13 | 3 = 13.3

For these times, find

(a) the mode,

(a)s [1]

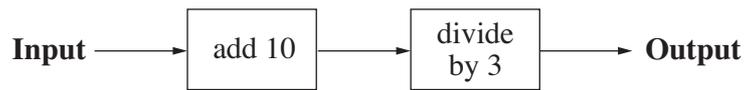
(b) the range,

(b)s [1]

(c) the median.

(c)s [1]

- 8 (a) Find the **output** from this number machine when the **input** is 8.



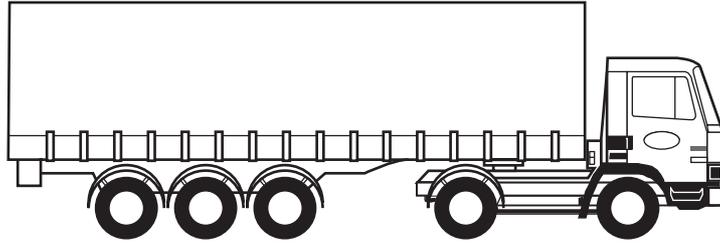
(a) [1]

- (b) Find the value of $5x + 2y$ when $x = -1$ and $y = 3$.

(b) [2]

TURN OVER FOR QUESTIONS 9 AND 10

9



Terry is given a model lorry for his birthday.
 The scale of the model is 1 : 60.
 The model lorry has a length of 15 cm.

Find the length of the actual lorry.
 Give your answer in metres.

..... m [3]

10 Expand and simplify.

$$5(x + 1) + 2(3x - 2)$$

..... [2]

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