

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

M6

TUESDAY 24 JUNE 2008

Morning
 Time: 30 minutes

Candidates answer on the question paper
Additional materials (enclosed): None

Additional materials (required):
 Geometrical instruments
 Tracing paper (optional)
 Scientific or graphical calculator



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.
- Write your answer to each question in the space provided.

INFORMATION FOR CANDIDATES

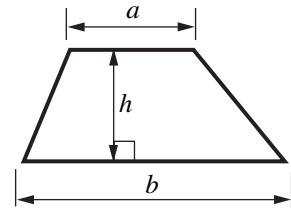
- The number of marks is given in brackets [] at the end of each question or part question.
- The total number of marks for this Section is **25**.
- Section B starts with question 8.
- You are expected to use a calculator in Section B of this paper.
- Use the π button on your calculator or take π to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

FOR EXAMINER'S USE	
SECTION B	
TOTAL	

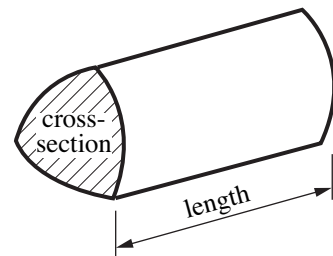
This document consists of **8** printed pages.

Formulae Sheet

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



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



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- 8 (a) Calculate.

$$\sqrt{6 \cdot 4^2 + 5 \cdot 1^2}$$

(a) [1]

- (b) The answer to a calculation is 3.7 hours.

Write this time in hours and minutes.

(b) hours minutes [1]

- 9 At a party there are lots of packets of crisps.
There are Plain, Bacon and Cheese flavours.

Steph takes a packet of crisps at random.

This table shows the probabilities of Steph getting the different flavours.

Flavour	Probability
Plain	0.4
Bacon	0.26
Cheese	

Complete the table.

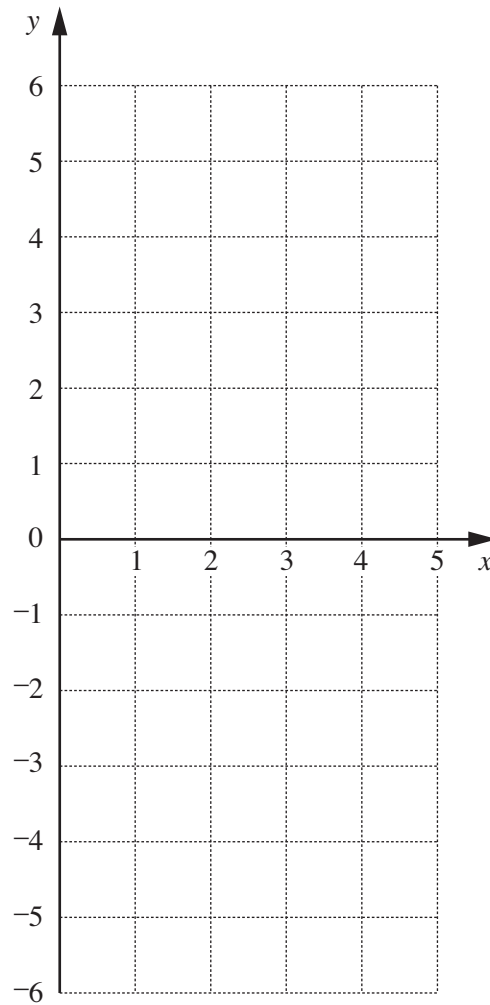
[2]

10 (a) Complete this table for $y = 5 - 2x$.

x	0	2	4
y	5		

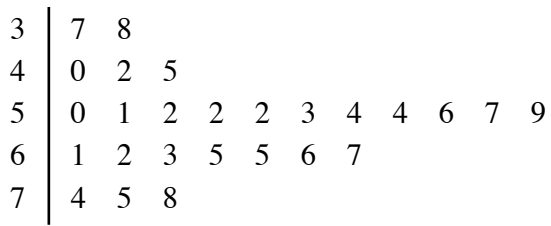
[1]

(b) Draw the graph of $y = 5 - 2x$.



[2]

11 This stem and leaf diagram shows the times that a group of people took to do a fun run.



Key: 5 | 3 represents 53 minutes

(a) What was the longest of these times?

(a) minutes [1]

(b) Find the median of these times.

(b) minutes [2]

(c) Juanita says that the range for these times is 38 to 78.

Explain the two errors that she has made.

- 1
-
- 2
- [2]

12 Spandown school decides to give money raised for charity to *Water for Life* and *Cancer Research* in the ratio 3 : 1.

(a) Year seven gives £312 to *Water for Life*.

How much money does Year seven give to *Cancer Research*?

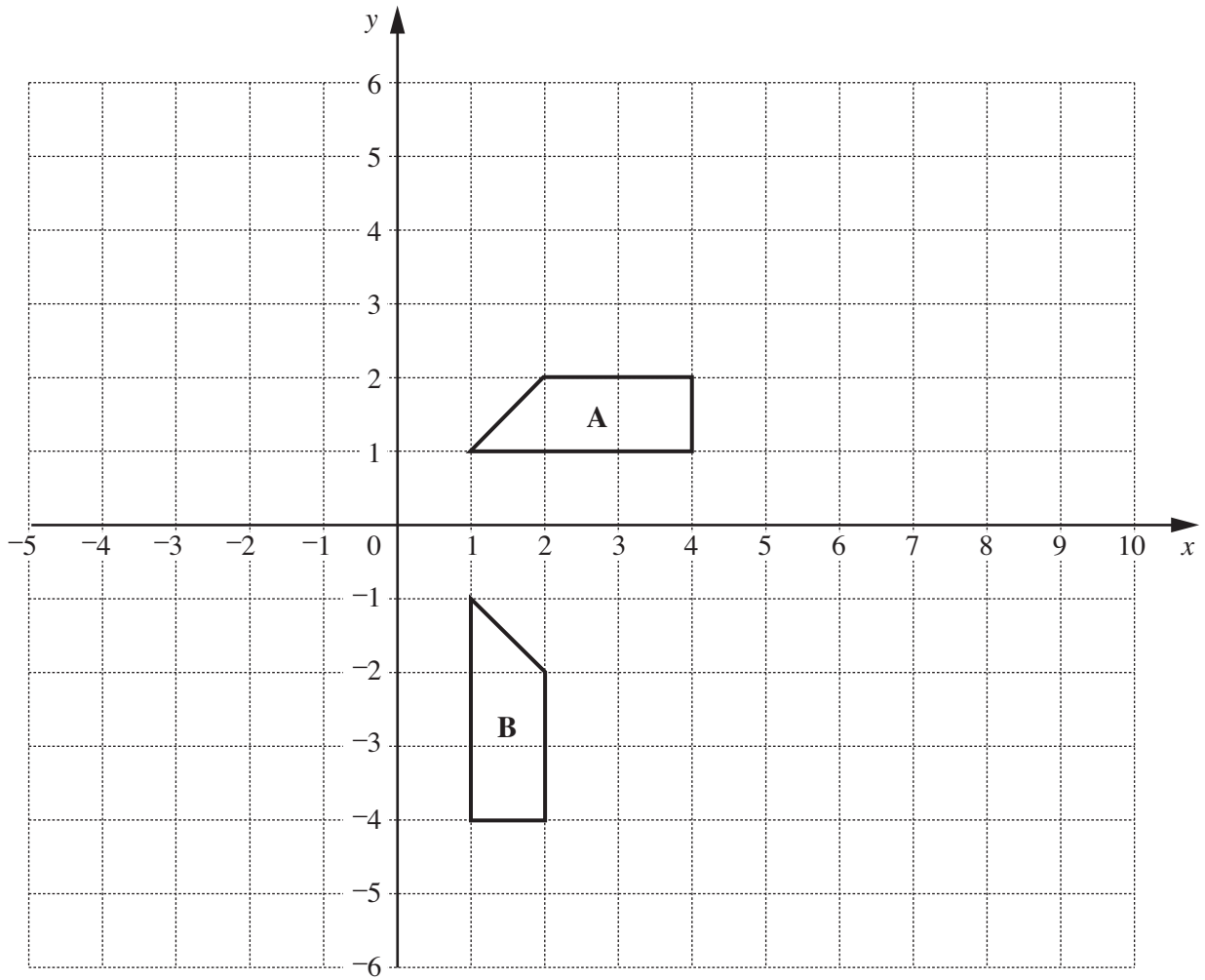
(a) £..... [2]

(b) Year eight raises £516 in total.

How much of this money do they give to *Water for Life*?

(b) £ [2]

13



Describe fully the **single** transformation which maps shape **A** onto shape **B**.

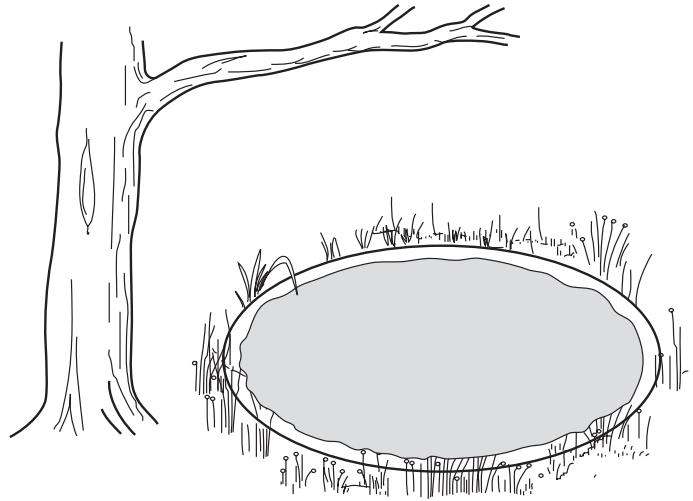
.....

..... [3]

TURN OVER FOR QUESTION 14

- 14** A circular pond has radius 4.1 m.

Calculate the surface area of the pond.
Give the units of your answer.



..... [3]

- 15 (a)** Write $6 \times p \times p \times p$ as simply as possible.

(a) [1]

- (b)** Multiply out.

$$5(2x - 3)$$

(b) [1]

- (c)** Factorise.

$$7x + 21$$

(c)..... [1]