Surname		Other Names	
Centre Number			Candidate Number									
Candidate Signature												

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General Certificate of Secondary Education
June 2006

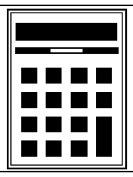
AQA
ASSESSMENT and QUALIFICATIONS ALLIANCE

MATHEMATICS (MODULAR) (SPECIFICATION B) 33005/F2
Module 5 Foundation Tier
Paper 2 Calculator

F

Monday 12 June 2006 9.00 am to 10.00 am

For this paper you must have:
- a calculator
- mathematical instruments



Time allowed: 1 hour

Instructions
- Use blue or black ink or ball-point pen. Draw diagrams in pencil.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- Answer the questions in the spaces provided.
- Use a calculator where appropriate.
- Do all rough work in this book.
- If your calculator does not have a π button, take the value of π to be 3.14 unless another value is given in the question.

Information
- The maximum mark for this paper is 60.
- The marks for questions are shown in brackets.
- You may ask for more answer paper, graph paper and tracing paper. This must be tagged securely to this answer book.

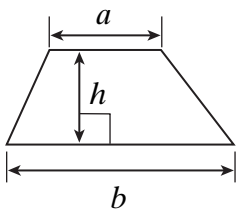
Advice
- In all calculations, show clearly how you work out your answer.

For Examiner's Use	
Pages	Mark
3	
4–5	
6–7	
8–9	
10–11	
12–13	
14–15	
TOTAL	
Examiner's Initials	

Formula Sheet: Foundation Tier

You may need to use the following formula:

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

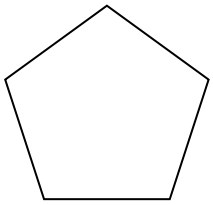
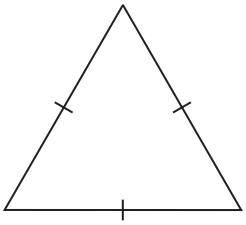
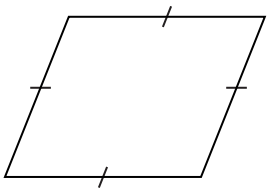


Answer **all** questions in the spaces provided.

1 The list gives the names of different shapes.

square	trapezium	pentagon	isosceles triangle
octagon	rectangle	rhombus	equilateral triangle

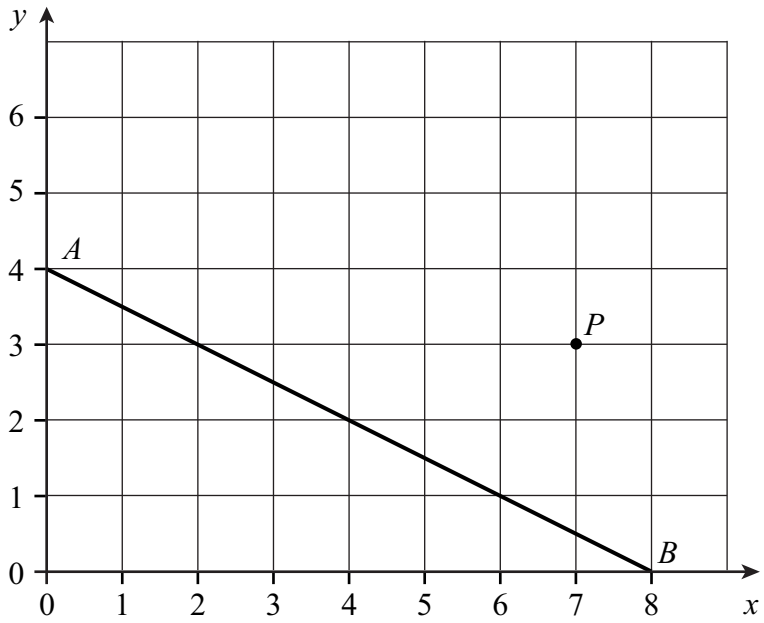
Choose words from the list to name each of the shapes below.

Shape	**Name**
	.....
	.....
	.....
	.....

(4 marks)

4

2 A line AB is shown on the grid.



(a) Mark the midpoint of AB.
Label it M.

(1 mark)

(b) Write down the coordinates of M.

Answer (..... , ...) *(1 mark)*

(c) Draw a line through the point P, parallel to the line AB.

(1 mark)

3 From the list of numbers

3 7 12 15 21 24 32 36 42

(a) write down the multiples of 8

.....

Answer ..... *(2 marks)*

(b) write down the factors of 45

.....

Answer ..... *(2 marks)*

(c) write down the square number.

.....

Answer ..... *(1 mark)*

4 The rule for working out a taxi fare is

£1.40
plus
75 p per mile

(a) Jo travels 2 miles.
Work out her fare.

.....

.....

Answer £ ..... *(2 marks)*

(b) Sam's taxi fare is £5.15
How many miles did he travel?

.....

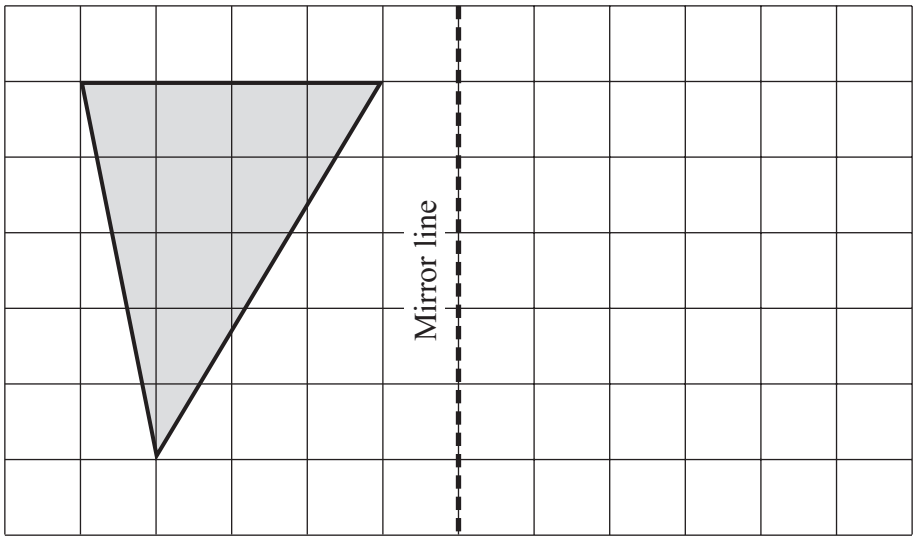
.....

.....

Answer ..... miles *(3 marks)*

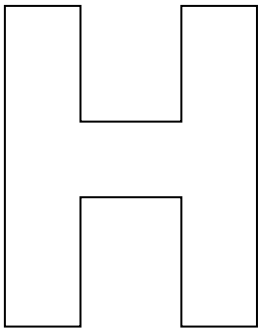
13

5 (a) Draw the reflection of the triangle in the mirror line.



(2 marks)

(b) Draw **all** the lines of symmetry on this shape.



(2 marks)

6 Part of a table of values for x and y is shown.

x	1	2	3	4					
$y = x + 2$	3	4	5	6					

(a) What is the value of y when $x = 9$?

.....

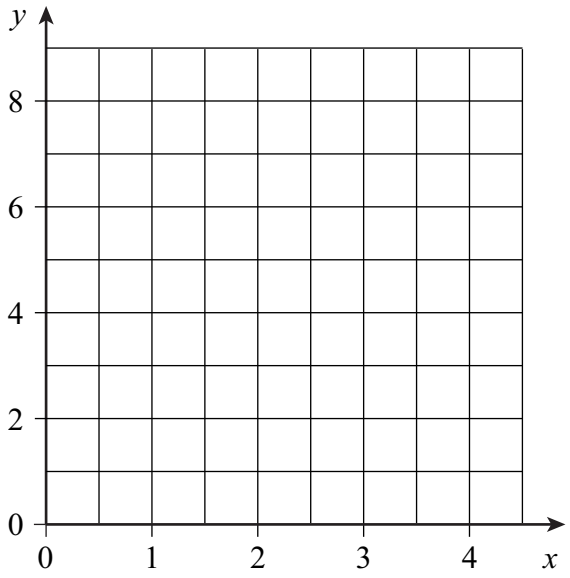
Answer $y =$ ..... *(1 mark)*

(b) What is the value of x when $y = 17$?

.....

Answer $x =$ ..... *(1 mark)*

(c) On the grid, plot the points given in the table.
Join them with a straight line.



(2 marks)

(d) Explain why the point $(2\frac{1}{2}, 5\frac{1}{2})$ does **not** lie on this line.

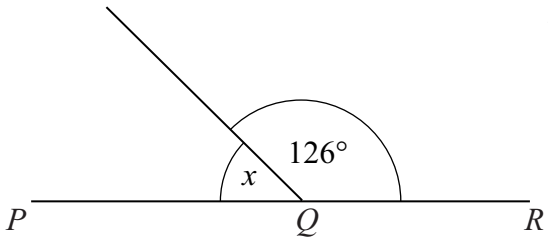
.....

.....

(1 mark)

9

7 (a) PQR is a straight line.



Not drawn accurately

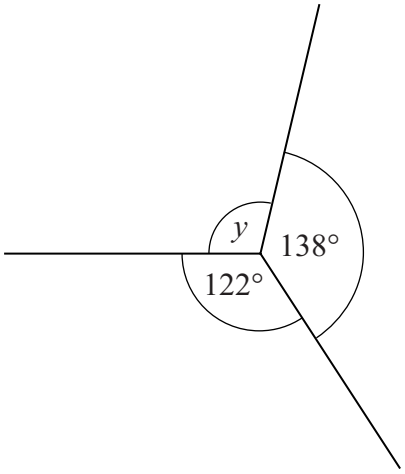
Find the value of x.

.....

.....

Answer ..... degrees *(2 marks)*

(b) The three lines shown below meet at a point.



Not drawn accurately

Find the value of y.

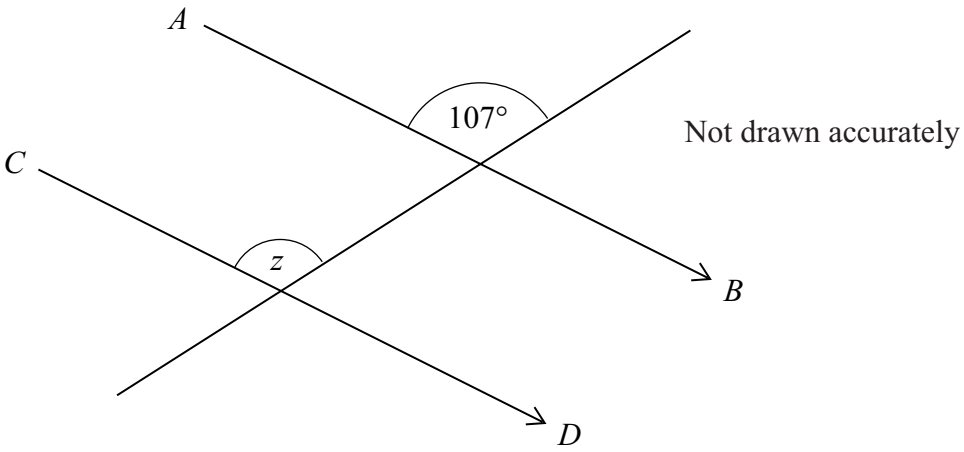
.....

.....

.....

Answer ..... degrees *(2 marks)*

(c) In the diagram, *AB* is parallel to *CD*.



Find the value of *z*.

.....

Answer ..... degrees *(1 mark)*

8 Calculate 36% of £420.

.....

.....

.....

.....

Answer £ ..... *(2 marks)*

7

9 Solve the equations

(a) $3x = 21$

.....

Answer $x =$ ..... *(1 mark)*

(b) $y - 2 = 9$

.....

Answer $y =$ ..... *(1 mark)*

(c) $4z - 1 = 9$

.....

.....

Answer $z =$ ..... *(2 marks)*

(d) $3t + 4 = 19 - 2t$

.....

.....

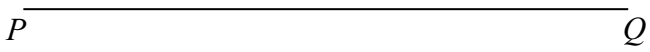
.....

.....

Answer $t =$ ..... *(3 marks)*

10 In triangle PQR, the side $PQ = 8$ cm
Angle $P = 70°$ and angle $Q = 50°$

(a) Make an accurate drawing of the triangle.
The side PQ has been drawn for you.



(2 marks)

(b) Measure and write down the length of PR.

Answer ..... cm *(1 mark)*

Turn over for the next question

10

11 Calculate

(a) 3.7^2

Answer ..... *(1 mark)*

(b) $\frac{1}{1.6}$

Answer ..... *(1 mark)*

(c) $4.4(6.2 - 2.7)$

Answer ..... *(1 mark)*

(d) $\frac{44.9 + 28.3}{31.5 \times 10.6}$

(i) Write down your full calculator display.

Answer ..... *(1 mark)*

(ii) Write down your answer to two decimal places.

Answer ..... *(1 mark)*

12 p is an odd number.
q is an even number.

Which **two** of these statements are correct?

A $p + q$ is always odd

B $2p$ is always odd

C $3p$ is always odd

D $5q$ is always odd

Answer ..... and ..... *(2 marks)*

13 Jon lives 17 kilometres from Aqamart.
Kevin lives 11 miles from Aqamart.

Which of them lives closest to Aqamart?
You **must** show how you work out your answer.

.....

.....

.....

.....

.....

Answer ..... *(3 marks)*

Turn over for the next question

10

14 The circumference of a circle measures 26.7 cm.

Work out the length of the diameter of the circle.

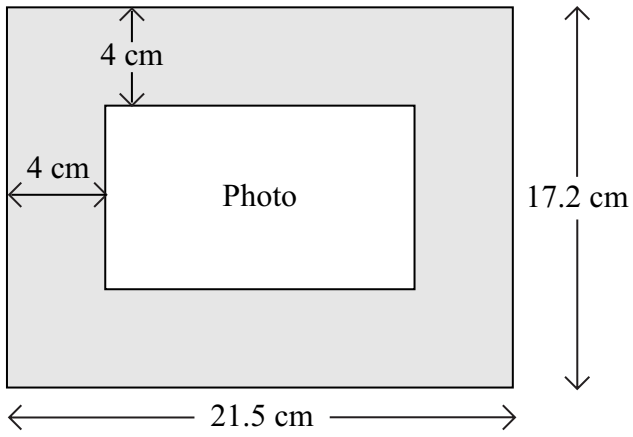
.....

.....

.....

Answer ..... cm *(2 marks)*

15 A rectangular photo is surrounded by a frame which is 4 cm wide.
The outer measurements of the frame are 21.5 cm by 17.2 cm.



Not drawn accurately

Calculate the area of the frame.
This area is shaded in the diagram.

.....

.....

.....

.....

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.....

.....

.....

.....

Answer ..... cm^2 *(5 marks)*

END OF QUESTIONS

7

There are no questions printed on this page