Centre No.						Paper Reference							Surname	Initial(s)
Candidate No.						5	5	2	1	/	0	1	Signature	

Paper Reference(s)

5521/01

Edexcel GCSE

Mathematics A – 1387

Paper 1 (Non-Calculator)

Foundation Tier

Tuesday 7 June 2005 – Afternoon

Time: 1 hour 30 minutes

Examiner's use only

Team Leader's use only

Materials required for examination

Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers

Nil

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature.
Check that you have the correct question paper.
Answer **ALL** the questions in the spaces provided in this question paper.
You must NOT write on the formulae page. Anything you write on the formulae page will gain NO credit.
If you need more space to complete your answer to any question, use additional answer sheets.

Information for Candidates

There are 23 questions in this question paper. The total mark for this paper is 100.
The marks for individual questions and the parts of questions are shown in round brackets: e.g. **(2)**.
Calculators must not be used.

Advice to Candidates

Show all stages in any calculations.
Work steadily through the paper. Do not spend too long on one question.
If you cannot answer a question, leave it and attempt the next one.
Return at the end to those you have left out.

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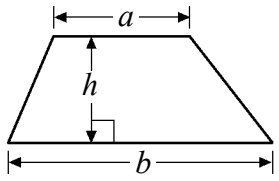
edexcel

GCSE Mathematics 1387/8

Formulae: Foundation Tier

You must not write on this formulae page.
Anything you write on this formulae page will gain NO credit

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



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Answer ALL TWENTY THREE questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

You must NOT use a calculator.

1. (a) Write the number **seventeen thousand, two hundred and fifty-two** in figures.

.....

(1)

(b) Write the number 5367 correct to the nearest hundred.

.....

(1)

(c) Write down the value of the 4 in the number 274 863

.....

(1)

(Total 3 marks)

Q1

2. (a) Complete the table by writing a sensible metric unit on each dotted line.
The first one has been done for you.

The distance from London to Birmingham	179 kilometres
The weight of a twenty pence coin	5 .....
The height of the tallest living man	232 .....
The volume of lemonade in a glass	250 .....

(3)

(b) Change 5000 metres to kilometres.

.....km

(1)

(Total 4 marks)

Q2

Leave blank

3. Here are the first five terms of a number sequence.

126 122 118 114 110

(a) Write down the next two terms of the number sequence.

..... , ...

(1)

(b) Explain how you found your answer.

.....

(1)

The 20th term of the number sequence is 50

(c) Write down the 21st term of the number sequence.

.....

(1)

(Total 3 marks)

Q3

4. Work out 286×43

.....

(Total 3 marks)

Q4

Leave blank

5. Here is a list of 8 numbers.

11 16 18 36 68 69 82 88

(a) Write down **two** numbers from the list with a sum of 87

..... , ...

(1)

(b) Write down a number from the list which is

(i) a multiple of 9,

.....

(ii) a square number.

.....

(2)

cube	multiple	factor	product

(c) Use a word from the box to complete this sentence correctly.

11 is a ……..…… of 88

(1)

Here are the same 8 numbers drawn larger.

11 16 18 36

68 69 82 88

(d) From these numbers, write down a number which has

(i) exactly **one** line of symmetry,

.....

(ii) 2 lines of symmetry **and** rotational symmetry of order 2,

.....

(iii) rotational symmetry of order 2 but **no** lines of symmetry.

.....

(3)

(Total 7 marks)

Q5

Leave blank

6. Some bulbs were planted in October.
The ticks in the table shows the months in which each type of bulb grows into flowers.

		Month					
		Jan	Feb	March	April	May	June
Type of bulb	Allium					✓	✓
	Crocus	✓	✓				
	Daffodil		✓	✓	✓		
	Iris	✓	✓				
	Tulip				✓	✓	

(a) In which months do tulips flower?

.....

(1)

(b) Which type of bulb flowers in March?

.....

(1)

(c) In which month do most types of bulb flower?

.....

(1)

(d) Which type of bulb flowers in the same months as the iris?

.....

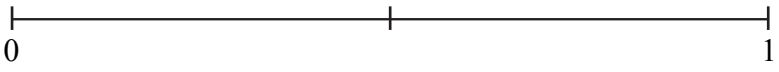
(1)

Ben puts one of each type of these bulbs in a bag.
He takes a bulb from the bag without looking.

(e) (i) Write down the probability that he will take a crocus bulb.

.....

(ii) On the probability scale, mark with a cross (×) the probability that he will take a bulb which flowers in February.



(2)

(Total 6 marks)

Q6

Leave blank

7.

Cat facts

- 40% of people named cats as their favourite pet.
- 98% of women said they would rather go out with someone who liked cats.
- About $7\frac{1}{2}$ million families have a cat.
- $\frac{1}{4}$ of cat owners keep a cat because cats are easy to look after.

(a) Write 40% as a fraction.
Give your fraction in its simplest form.

.....
(2)

(b) Write 98% as a decimal.

.....
(1)

(c) Write $7\frac{1}{2}$ million in figures.

.....
(1)

(d) Write $\frac{1}{4}$ as a percentage.

.....%
(1)

(e) What percentage of people did **not** name cats as their favourite pet?

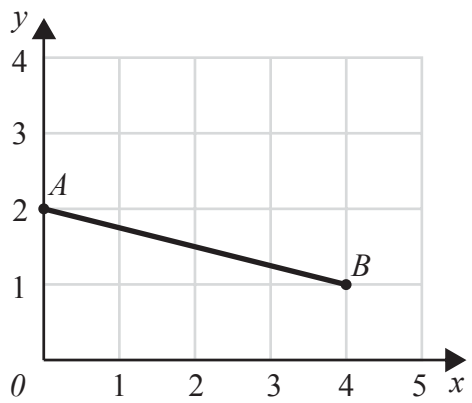
.....%
(1)

(Total 6 marks)

Q7

Leave blank

8.



(a) Write down the coordinates of the point

(i) A,

(…….. , ……..)

(ii) B.

(…….. , ……..)

(2)

(b) On the grid, mark with a cross (×) the midpoint of the line AB.

(1)

Q8

(Total 3 marks)

Leave blank

9. The table can be used to convert between Euros (€) and Pounds (£).

Euros (€)	Pounds (£)
0.10	0.08
0.20	0.16
0.50	0.40
1	0.80
2	1.60
3	2.40
4	3.20

(a) Change €3 to pounds.

£.....

(1)

(b) Change €2.50 to pounds.

£.....

(2)

(c) Change £1 to euros.

€.....

(2)

(Total 5 marks)

Q9

Leave blank

10.

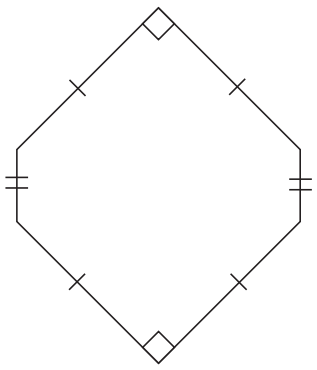


Diagram **NOT** accurately drawn

The diagram shows a shape.
The shape is a 6-sided polygon.

(a) Write down the mathematical name for a 6-sided polygon.

.....

(1)

The diagram below shows how the shape tessellates.

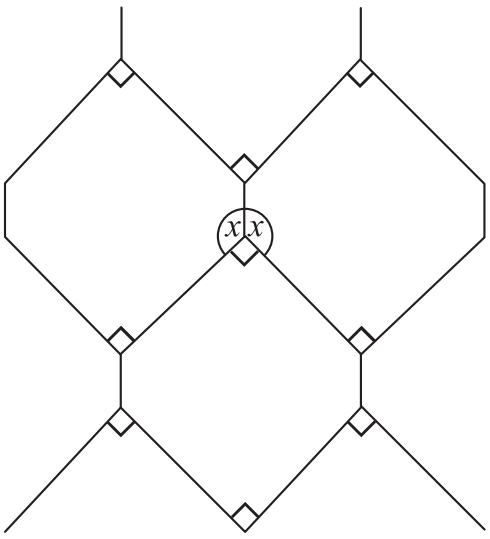


Diagram **NOT** accurately drawn

The size of each of the angles marked x is 135°.

(b) Give reasons why.

.....

.....

.....

(2)

Leave blank

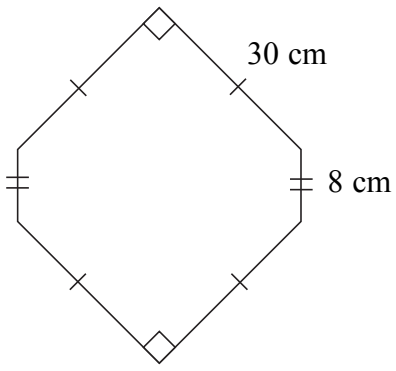


Diagram **NOT** accurately drawn

The diagram shows the lengths of two of the sides of the shape.

(c) Work out the perimeter of the shape.

.....cm
(2)
(Total 5 marks)

Q10

11. Write these numbers in order of size.
Start with the smallest number.

(a) 76, 103, 13, 130, 67

.....
(1)

(b) –3, 5, 0, –7, –1

.....
(1)

(c) 0.72, 0.7, 0.072, 0.07, 0.702

.....
(1)

(d) 70%, $\frac{3}{4}$, 0.6, $\frac{2}{3}$

.....
(2)
(Total 5 marks)

Q11

Leave blank

12. Jade made a train journey.
Her train should have arrived at 14 40
It arrived 1 hour 50 minutes late.

(a) At what time did her train arrive?

.....
(1)

The railway company gave Jade some money back, because her train was late.
The company used this rule to work out the amount of money.

Find $\frac{1}{4}$ of the ticket price
Then round **up** this answer to the next whole number of pounds

Jade's ticket price was £33.56

(b) (i) Work out $\frac{1}{4}$ of £33.56

£.....

(ii) Round up your answer to part (i) to the next whole number of pounds.

£.....
(3)

Q12

(Total 4 marks)

Leave blank

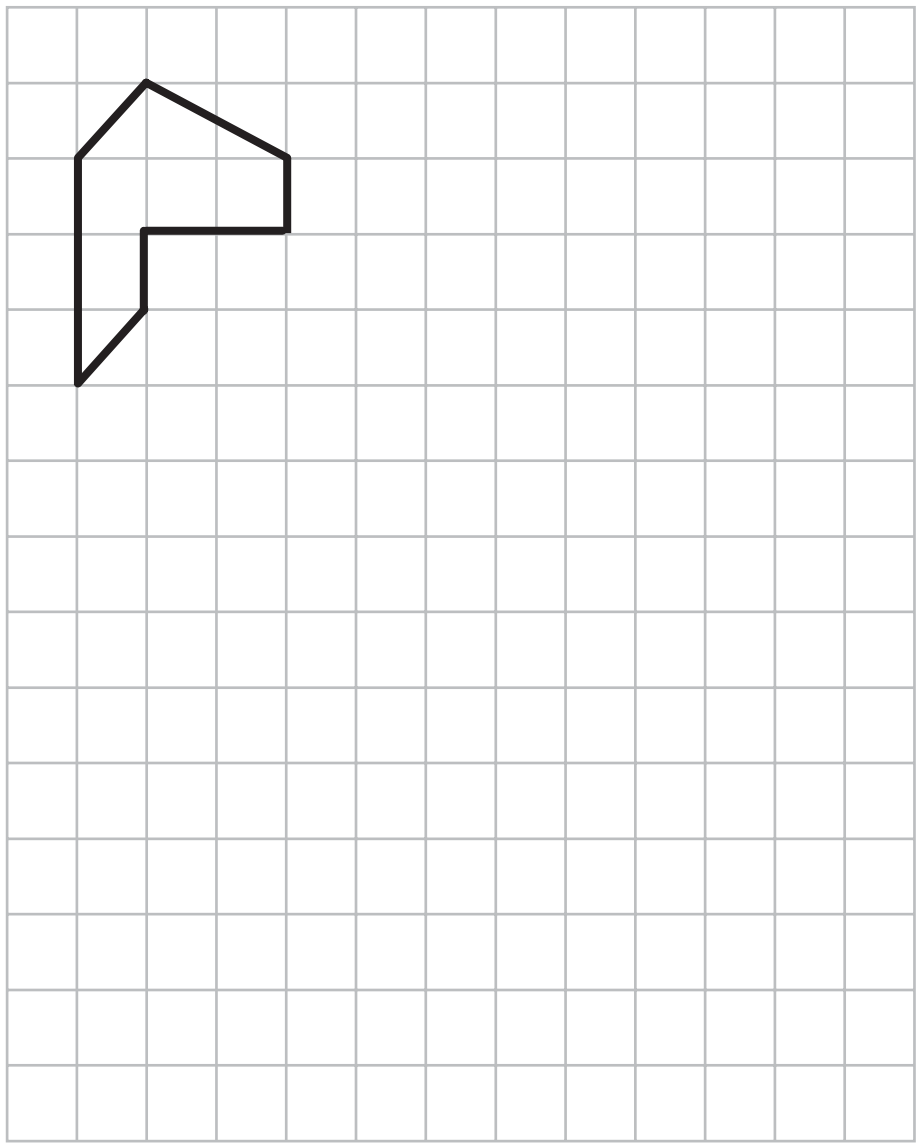
13. A shape has been drawn on a grid of centimetre squares.

(a) Work out the area of the shape.
State the units with your answer.

.....

(3)

(b) On the grid, enlarge the shape with a scale factor of 2.



(2)

Q13

(Total 5 marks)

Leave blank

14. The cost, in pounds, of hiring a car can be worked out using this rule.

Add 3 to the number of days' hire
Multiply your answer by 10

(a) Work out the cost of hiring a car for 4 days.

£.....

(2)

Bishen hired a car.
The cost was £120

(b) Work out the number of days for which Bishen hired the car.

.....

(2)

The cost of hiring a car for n days is C pounds.

(c) Write down a formula for C in terms of n.

.....

(3)

(Total 7 marks)

Q14

Leave blank

15. 80 students each study one of three languages.
The two-way table shows some information about these students.

	French	**German**	**Spanish**	**Total**
Female	15			39
Male		17		41
Total	31	28		80

Complete the two-way table.

(Total 2 marks)

Q15

16. (a) Simplify $3p + 2q - p + 2q$

.....

(2)

(b) Simplify $3y^2 - y^2$

.....

(1)

(c) Simplify $5c + 7d - 2c - 3d$

.....

(2)

(d) Simplify $4p \times 2q$

.....

(1)

(Total 6 marks)

Q16

Leave blank

17. The diagram shows a 5-sided shape.
All the sides of the shape are equal in length.

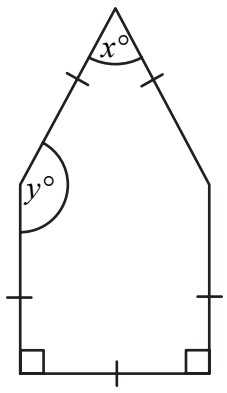


Diagram **NOT** accurately drawn

(a) (i) Find the value of x.

$x =$ .....

(ii) Give a reason for your answer.

.....

(2)

(b) Work out the value of y.

$y =$ .....

(2)

Q17

(Total 4 marks)

18. Work out $60 \times \frac{2}{3}$

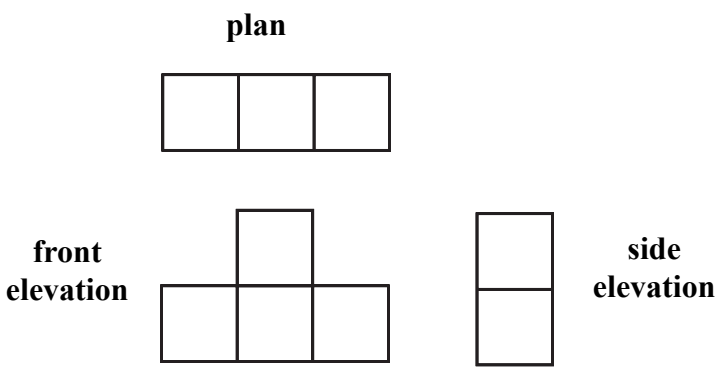
.....

Q18

(Total 2 marks)

Leave blank

19. Here are the plan, front elevation and side elevation of a 3-D shape.



In the space below, draw a sketch of the 3-D shape.

Q19

(Total 2 marks)

20. Work out an estimate for the value of $\dfrac{637}{3.2\times9.8}$

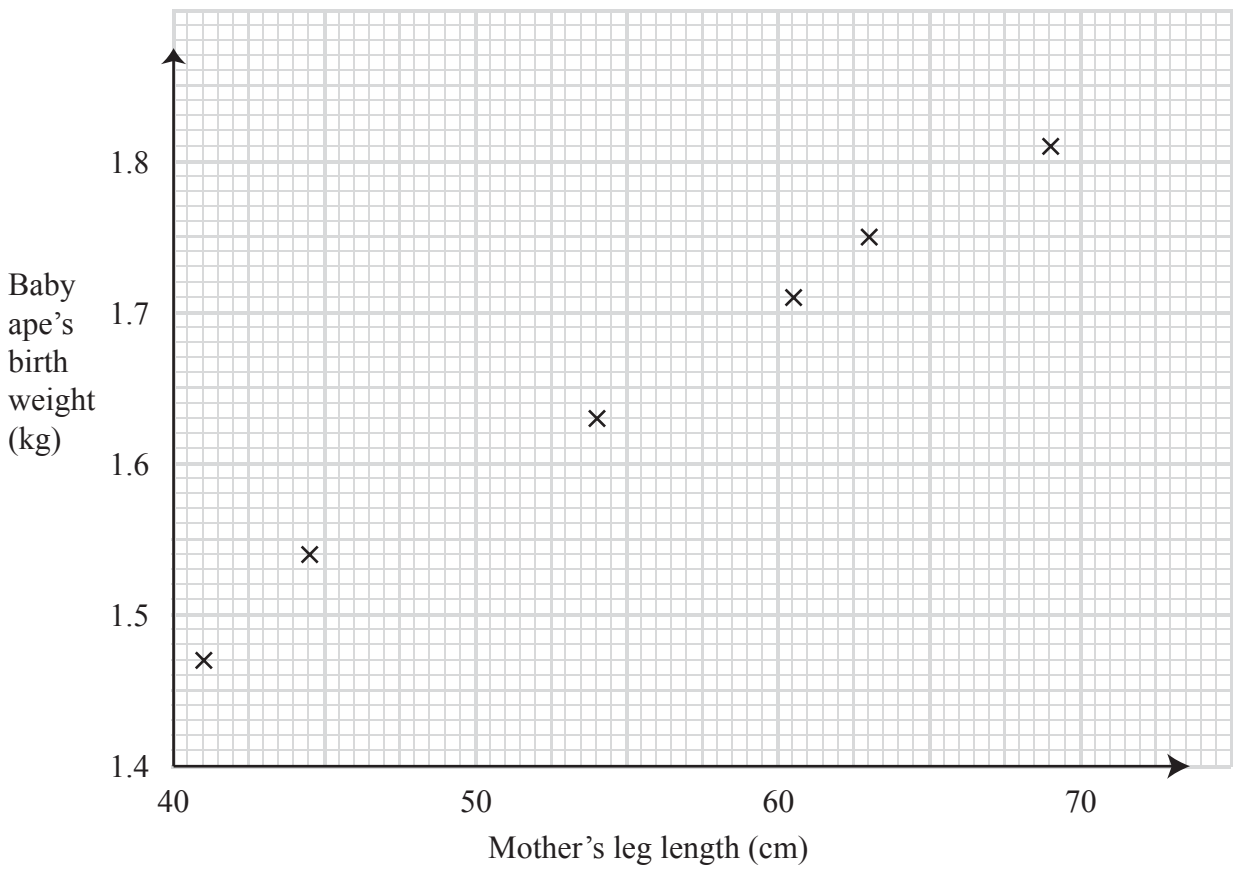
Q20

.....

(Total 2 marks)

Leave blank

21. The scatter graph shows some information about six new-born baby apes.
For each baby ape, it shows the mother's leg length and the baby ape's birth weight.



The table shows the mother's leg length and the birth weight of two more baby apes.

Mother's leg length (cm)	50	65
Baby ape's birth weight (kg)	1.6	1.75

(a) On the scatter graph, plot the information from the table.

(1)

(b) Describe the **correlation** between a mother's leg length and her baby ape's birth weight.

.....

(1)

(c) Draw a line of best fit on the diagram.

(1)

A mother's leg length is 55 cm.

(d) Use your line of best fit to estimate the birth weight of her baby ape.

.....kg

(1)

Q21

(Total 4 marks)

Leave blank

22. Here are the ingredients needed to make 500 m*l* of custard.

Custard

makes 500 m*l*

400 m*l* of milk
3 large egg yolks
50 g sugar
2 teaspoons of cornflour

(a) Work out the amount of sugar needed to make 2000 m*l* of custard.

.....g
(2)

(b) Work out the amount of milk needed to make 750 m*l* of custard.

.....m*l*
(2)

(Total 4 marks)

Q22

Leave blank

23. The diagram shows a wall with a door in it.

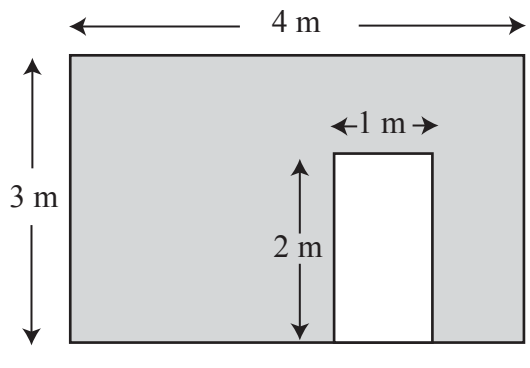


Diagram **NOT** accurately drawn

(a) Work out the shaded area.

..... m^2
(3)

Meg can cover the shaded area with 680 tiles.
She buys extra tiles in case she breaks some.
To work out the total number of tiles to buy, Meg increases 680 by 10%.

(b) (i) Increase 680 by 10%.

.....

The tiles Meg is going to use are sold in boxes of 50.

(ii) Work out the number of boxes of tiles Meg should buy.

.....
(5)

Q23

(Total 8 marks)

TOTAL FOR PAPER: 100 MARKS

END