

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

Paper Reference(s)

5521/02

Edexcel GCSE

Mathematics A – 1387

Paper 2 (Calculator)

Foundation Tier

Monday 12 June 2006 – Morning

Time: 1 hour 30 minutes

Examiner's use only

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Team Leader's use only

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Materials required for examination

Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser, calculator. 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

The marks for individual questions and the parts of questions are shown in round brackets: e.g. (2).

There are 28 questions in this question paper. The total mark for this paper is 100.

There are 24 pages in this question paper. Any blank pages are indicated.

Calculators may be used.

If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.

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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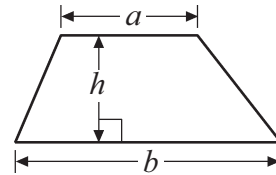
edexcel

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



Answer ALL TWENTY EIGHT questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

1. (a) Write one pound thirty pence in figures.

£
(1)

(b) Write one pound five pence in figures.

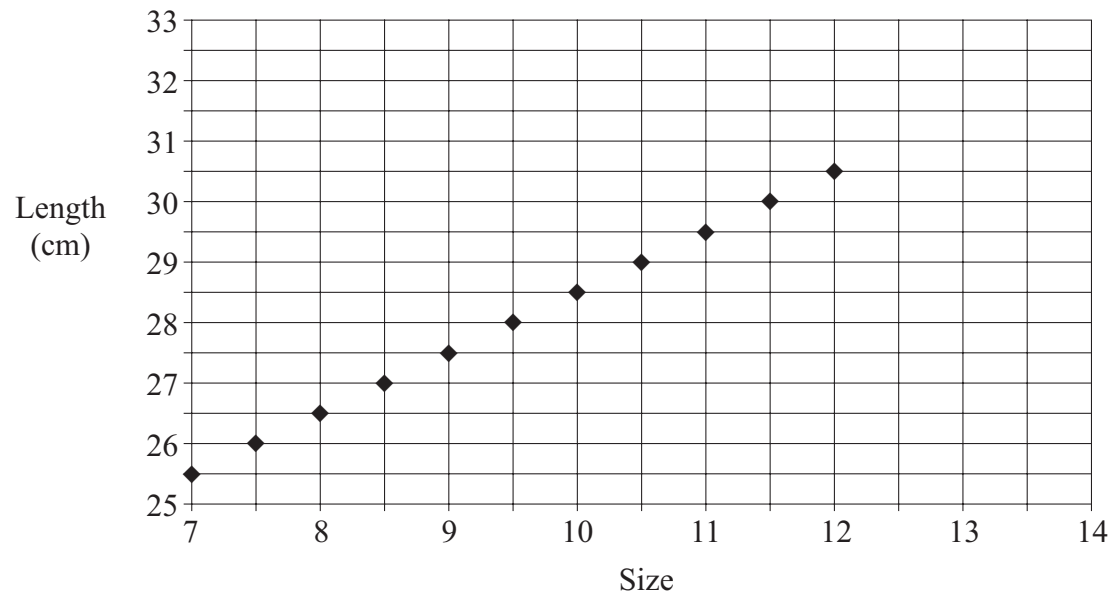
£
(1)

(Total 2 marks)

Q1

2. Each point on the graph represents the size of a shoe and its length, in cm.

Shoes



(a) Write down the length of a size 9 shoe.

..... cm
(1)

(b) Write down the size of a shoe with a length of 29.5 cm.

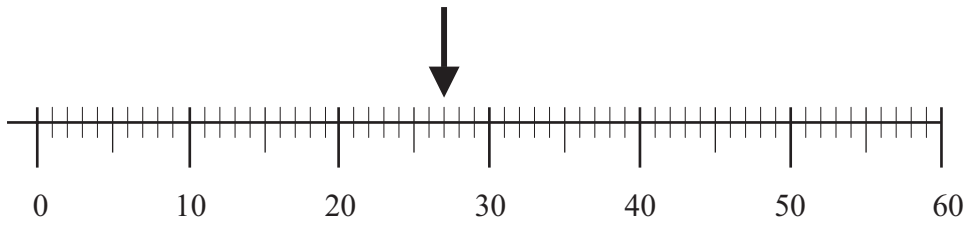
.....
(1)

(Total 2 marks)

Q2

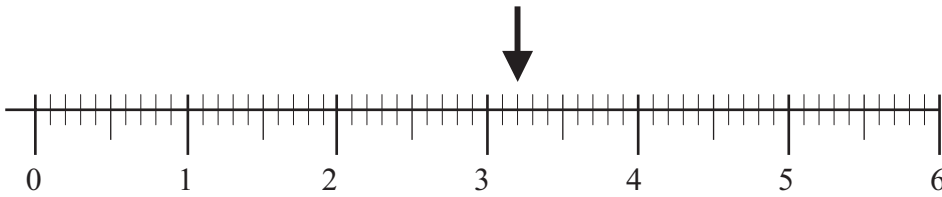


3.



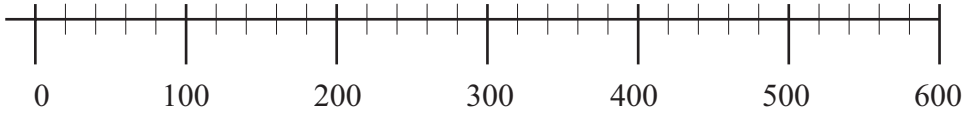
(a) Write down the number marked by the arrow.

.....
(1)



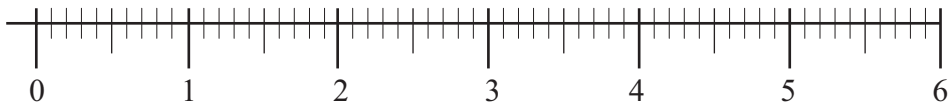
(b) Write down the number marked by the arrow.

.....
(1)



(c) Find the number 460 on the number line.
Mark it with an arrow (\downarrow).

(1)



(d) Find the number 2.8 on the number line.
Mark it with an arrow (\downarrow).

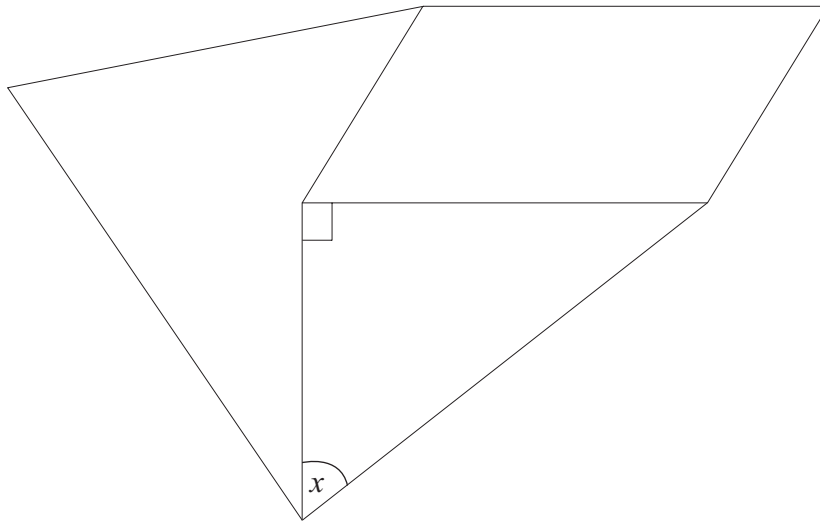
(1)

(Total 4 marks)

Q3



4. The shape is made from a right-angled triangle, a parallelogram and a quadrilateral.



- (a) Mark with arrows (\gg) a pair of parallel lines. (1)
- (b) Mark with the letter *A* an acute angle. (1)
- (c) Mark with the letter *R* a reflex angle. (1)
- (d) Measure the size of angle *x*.

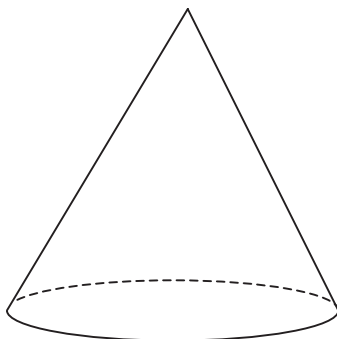
.....°
(1)

(Total 4 marks)

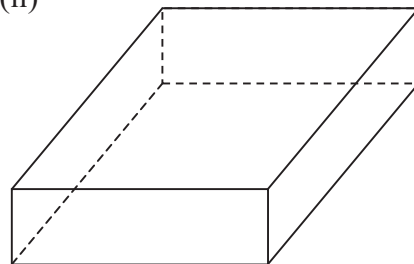
Q4

5. Write down the name of each of these two 3-D shapes.

(i)



(ii)



(i)

(ii)

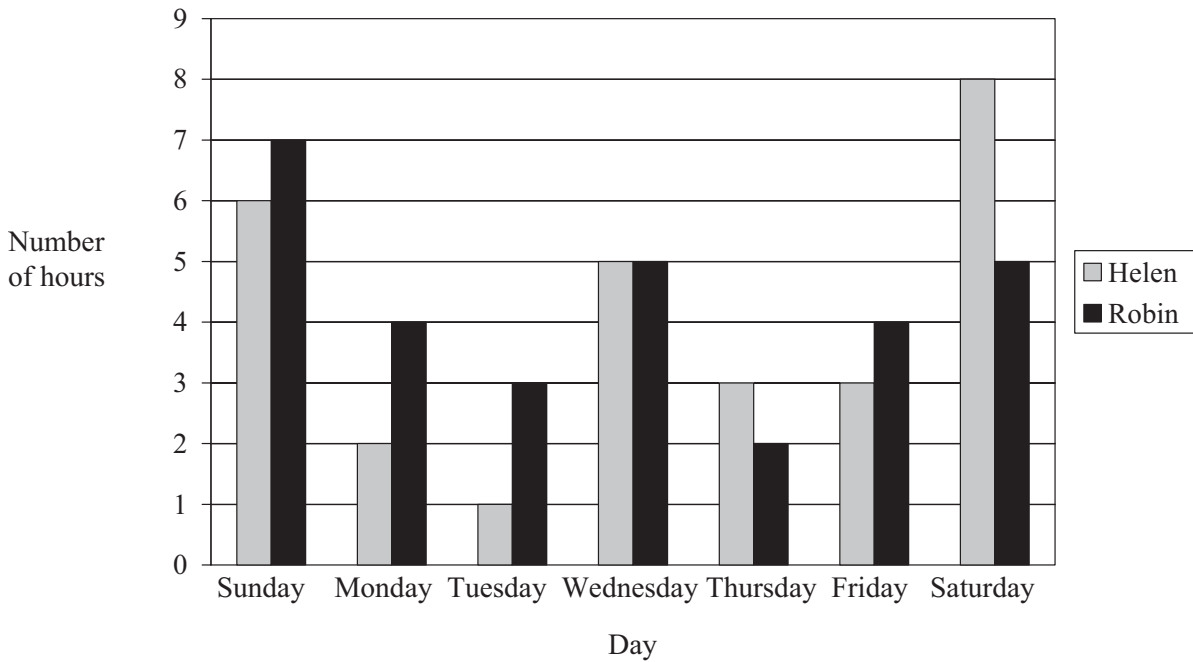
(Total 2 marks)

Q5



6. Here is a bar chart showing the number of hours of TV that Helen and Robin watched last week.

Hours of TV watched last week



(a) Write down the number of hours of TV that Helen watched on Monday.

..... hours
(1)

(b) On which day did Helen and Robin watch the same number of hours of TV?

.....
(1)

(c) (i) Work out the total number of hours of TV that Robin watched on Friday and Saturday.

..... hours

(ii) Who watched the greater number of hours of TV on Friday and Saturday?
Show your working.

.....
(3)

(Total 5 marks)

Q6



7. (a) Measure the length of the line AB .



..... cm
(1)

(b) Mark the mid point of the line AB with a cross (\times).
Label this point P .

(1)

(c) Draw a circle with centre P so that AB is the diameter of the circle.

(1)

(Total 3 marks)

Q7



8.

Pete's Café	
Price List	
Cup of Tea	75p
Cup of Coffee	85p
Can of Cola	75p
Roll	£1.70
Sandwich	£1.35

Joe buys a can of cola and a roll.

(a) Work out the total cost.

£
(1)

Susan buys **two** cups of tea and **one** sandwich.

(b) Work out the total cost.

£
(2)

Kim buys a cup of coffee and a roll.

She pays with a £5 note.

(c) How much change should she get?

£
(2)

(Total 5 marks)

Q8



9. Amanda collected 20 leaves and wrote down their lengths, in cm.

Here are her results.

5 6 5 2 4 5 8 7 5 4
 7 6 4 3 5 7 6 4 8 5

(a) Complete the frequency table to show Amanda's results.

Length in cm	Tally	Frequency
2		
3		
4		
5		
6		
7		
8		

(2)

(b) Write down the modal length.

..... cm
 (1)

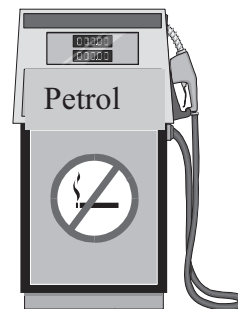
(c) Work out the range.

..... cm
 (1)

(Total 4 marks)

Q9

10. The cost of 20 litres of petrol is £18
 Work out the cost of 1 litre of petrol.




.....

(Total 3 marks)

Q10



11. Complete this bill.



Gary's Auto Repairs

Description	Number	Cost of each item	Total
Spark plug	4	£2.50	£10.00
Wiper blade	2	£1.50	£
Light bulb	2	£	£ 5.00
Labour charge	1½ hours at £ 16.00 an hour		£
Total cost			£

Q11

(Total 4 marks)

12. (a) Write $\frac{1}{10}$

(i) as a decimal,

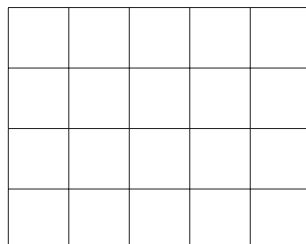
.....

(ii) as a percentage.

.....

(2)

(b) Shade $\frac{3}{5}$ of this shape.



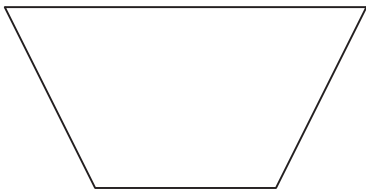
(1)

Q12

(Total 3 marks)



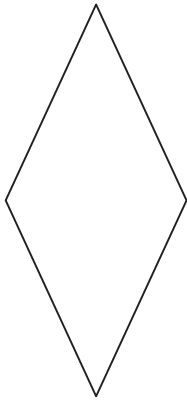
13. Here are five shapes.



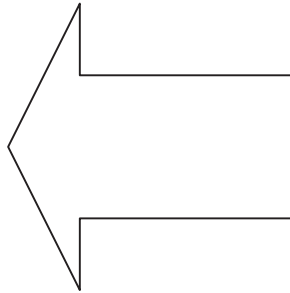
A



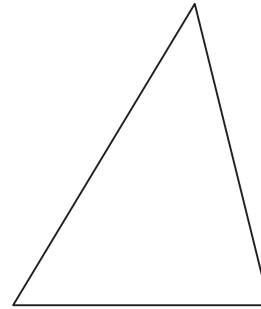
B



C



D



E

Two of these shapes have only **one** line of symmetry.

(a) Write down the letter of each of these **two** shapes.

..... and.....
(2)

Two of these shapes have rotational symmetry of order 2.

(b) Write down the letter of each of these **two** shapes.

..... and.....
(2)

(Total 4 marks)

Q13



14. Danny shares a bag of 20 sweets with his friends.

He gives Mary $\frac{3}{5}$ of the sweets.

He gives Ann $\frac{1}{10}$ of the sweets.

He keeps the rest for himself.

How many sweets does Danny keep for himself?

.....
(Total 3 marks)

Q14

15. Simplify

(a) $c + c + c$

.....
(1)

(b) $e + f + e + f + e$

.....
(1)

(c) $2a + 3a$

.....
(1)

(d) $2xy + 3xy - xy$

.....
(1)

(e) $3a + 5b - a + 2b + 8$

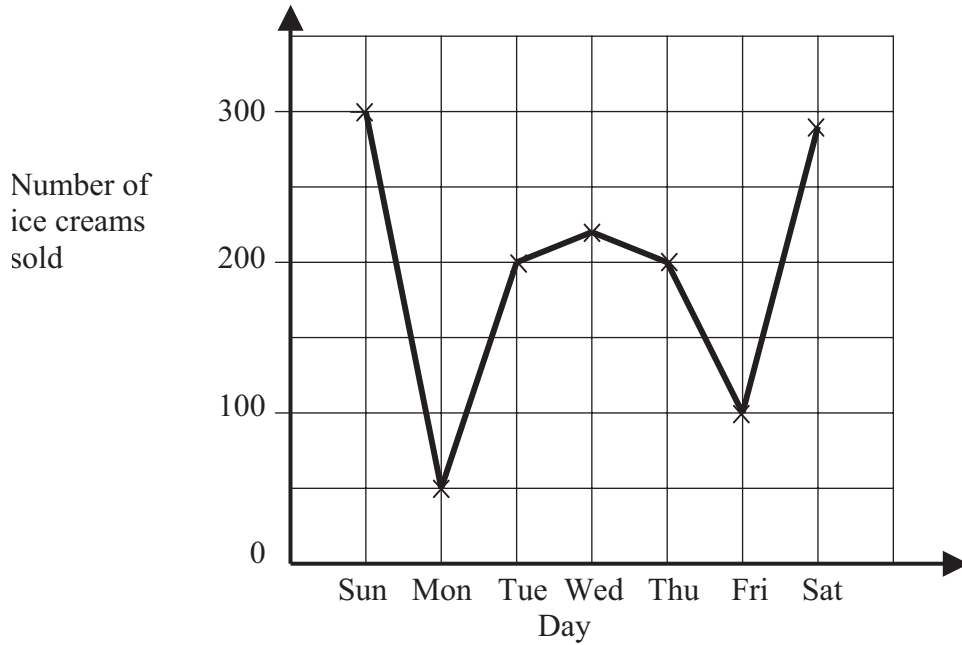
.....
(2)

(Total 6 marks)

Q15



16. The graph shows the number of ice creams sold each day during one week.



(a) How many more ice creams were sold on Tuesday than on Monday?

..... ice creams
(1)

(b) Explain what might have happened on Monday.

.....
.....
(1)

(Total 2 marks)

Q16



17. Ron went to Spain.

He changed £200 into Euros (€).
The exchange rate was £1 = €1.40

(a) How many Euros did he get?

€
(2)

When he came home he changed €10.64 back into pounds.
The exchange rate was now £1 = € 1.33

(b) How many pounds did he get?

£
(2)

(Total 4 marks)

Q17



18. Navjeet uses this rule to work out his pay.

$$\text{Pay} = \text{Number of hours worked} \times \text{rate of pay per hour}$$

This week Navjeet worked for 10 hours.
His rate of pay per hour was £4.50

(a) Use this rule to work out his pay.

£
(2)

Last week Navjeet's pay was £66
He worked for 12 hours.

(b) Work out Navjeet's rate of pay per hour last week.

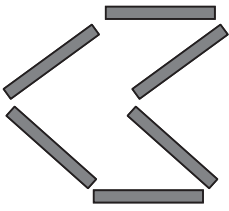
£
(2)

(Total 4 marks)

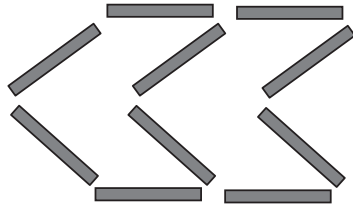
Q18



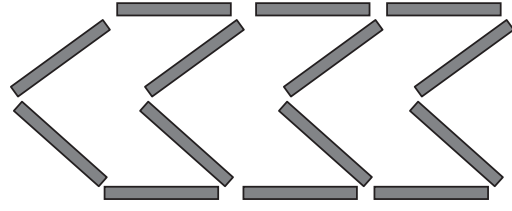
19. Here are some patterns made from sticks.



Pattern number 1



Pattern number 2



Pattern number 3

(a) Complete Pattern number 4.

(1)

(b) Complete the table.

Pattern number	Number of sticks
1	6
2	10
3	14
4	
5	

(2)

Q19

(Total 3 marks)



20. (a) Work out the area of this rectangle.

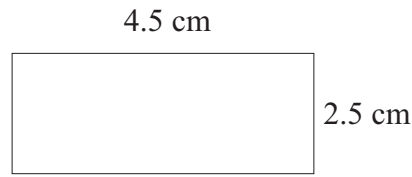


Diagram NOT accurately drawn

..... cm²
(2)

A square has an area of 324 cm².

(b) Work out the length of one side of the square.

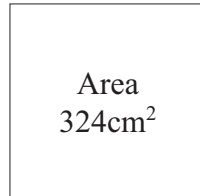


Diagram NOT accurately drawn

..... cm
(2)

(Total 4 marks)

Q20

21. Bob lays 200 bricks in 1 hour.
He always works at the same speed.

Work out how long it will take Bob to lay 960 bricks.
Give your answer in hours and minutes.



..... hours minutes

(Total 3 marks)

Q21



22. Joshua rolls an ordinary dice once.
It has faces marked 1, 2, 3, 4, 5 and 6.

(a) Write down the probability that he gets

(i) a 6,

.....

(ii) an odd number,

.....

(iii) a number less than 3,

.....

(iv) an 8.

.....

(4)

Ken rolls a different dice 60 times.
This dice also has six faces.

The table gives information about Ken's scores.

Score on dice	Frequency
1	9
2	11
3	20
4	2
5	8
6	10

(b) Explain what you think is different about Ken's dice.

.....

(1)

Q22

(Total 5 marks)



23. Lewis wants to buy a new pair of trainers.

There are 3 shops that sell the trainers he wants.

Sports '4' All
Trainers
£5
plus
10 payments of
£4.50

Edexcel Sports
Trainers
 $\frac{1}{5}$ off
usual price of
£65

Keef's Sports
Trainers
£50
plus
VAT at 17½%

(a) Work out the cost of a pair of the trainers in Sports '4' All.

£
(2)

(b) Work out the cost of a pair of the trainers in Edexcel Sports.

£
(2)

(c) Work out the cost of a pair of the trainers in Keef's Sports.

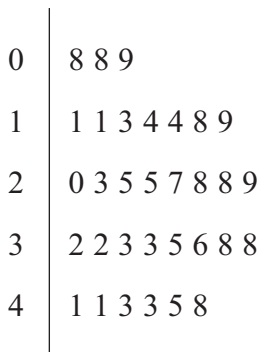
£
(2)

(Total 6 marks)

Q23



24. The stem and leaf diagram shows information about the areas of 32 photographs.



Key: 4 | 1 represents 41 cm²

(a) Write down the number of photographs that have an area of 38 cm².

.....
(1)

(b) Work out the median.

..... cm²
(2)

(Total 3 marks)

Q24

25. The top of a table is a circle.
The radius of the top of the table is 50 cm.



(a) Work out the area of the top of the table.

..... cm²
(2)

The base of the table is a circle.
The diameter of the base of the table is 40 cm.

(b) Work out the circumference of the base of the table.

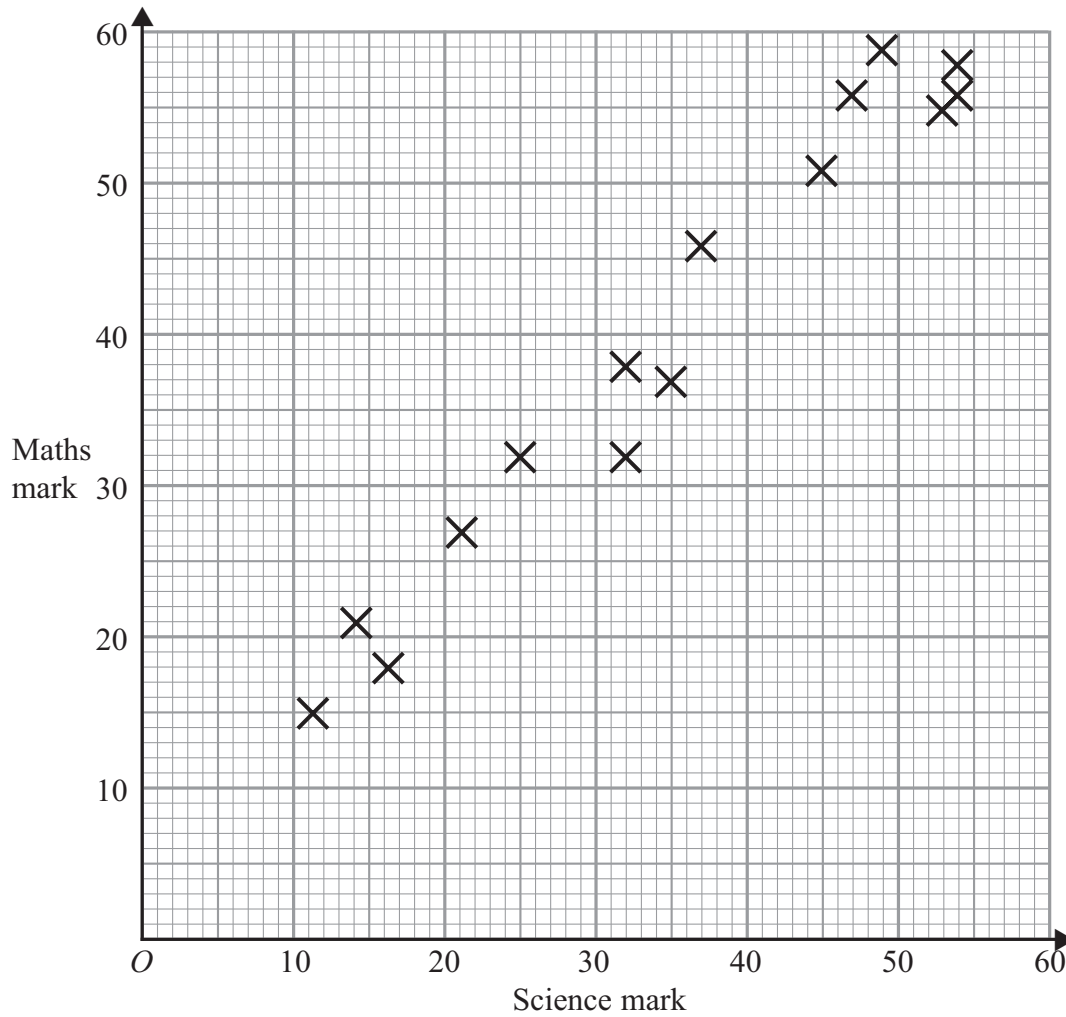
..... cm
(2)

(Total 4 marks)

Q25



26. The scatter graph shows the Science mark and the Maths mark for 15 students.



(a) What type of correlation does this scatter graph show?

.....
(1)

(b) Draw a line of best fit on the scatter graph.

(1)

Sophie's Science mark was 42.

(c) Use your line of best fit to estimate Sophie's Maths mark.

.....
(1)

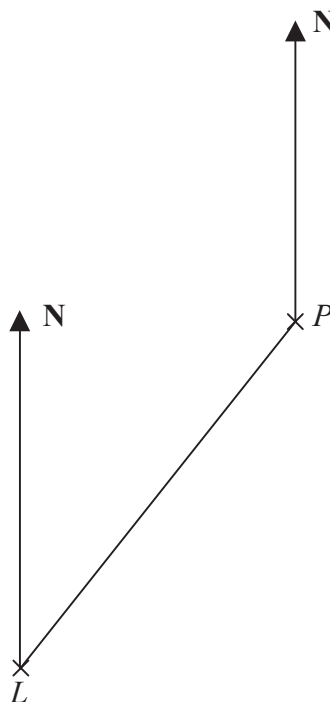
(Total 3 marks)

Q26



27. Ben sails his boat from a port P to a lighthouse L .

(a) Measure and write down the bearing of the lighthouse L from the port P .



Scale: 1 cm represents 5 km

.....
(1)

From the lighthouse L , Ben sails on a bearing of 320° .
He sails for 35 km on this bearing to a port Q .

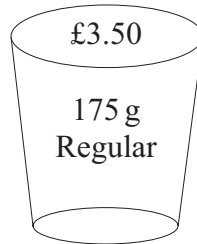
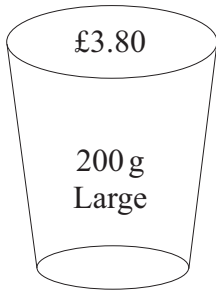
(b) Mark port Q with a cross (\times) and label it Q .
Use the scale of 1 cm to represent 5 km.

(2) Q27

(Total 3 marks)



28.



A Large tub of popcorn costs £3.80 and holds 200 g.
A Regular tub of popcorn costs £3.50 and holds 175 g.

Rob says that the 200 g Large tub is the better value for money.
Linda says that the 175 g Regular tub is the better value for money.

Who is correct?

.....

Explain the reasons for your answer.
You must show all your working.

Q28

(Total 2 marks)

TOTAL FOR PAPER: 100 MARKS

END

