

# **GCSE Grade 4**

## **Maths**

## **Booklet 5**

Paper 3H  
Calculator

[www.ggmaths.co.uk](http://www.ggmaths.co.uk)

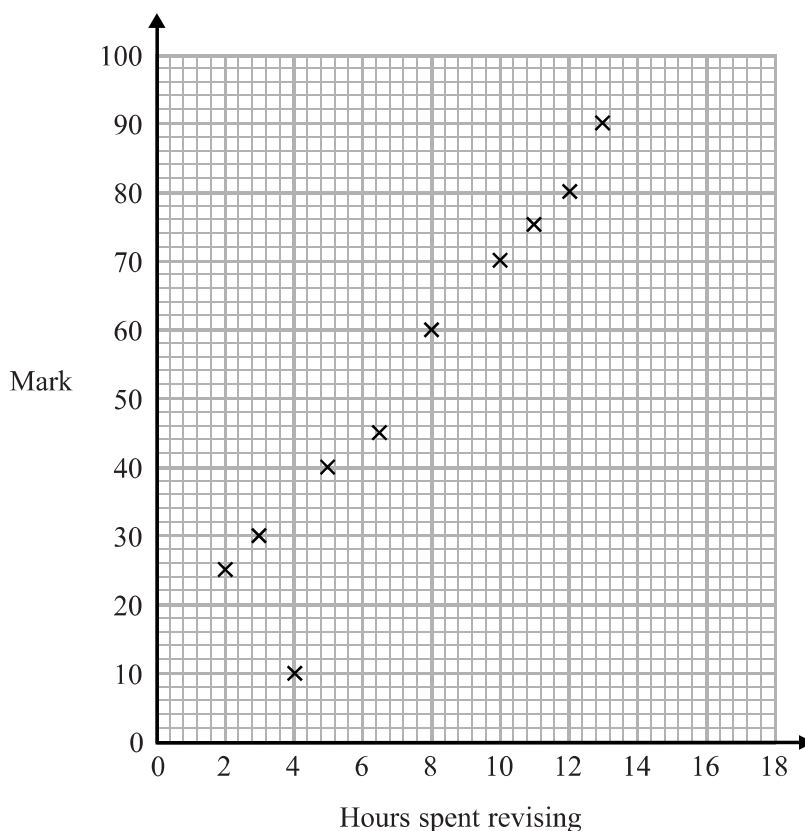
Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

- 1 The scatter diagram shows information about 10 students.

For each student, it shows the number of hours spent revising and the mark the student achieved in the Spanish test.



One of the points is an outlier.

- (a) Write down the coordinates of the outlier.

(1)



For all the **other** points

- (b) (i) draw the line of best fit,  
(ii) describe the correlation.

(2)

A different student studies for 9 hours.

- (c) Estimate the mark gained by this student.

(1)

The Spanish test was marked out of 100

Lucia says,

“I can see from the graph that had I revised for 18 hours I would have got full marks.”

- (d) Comment on what Lucia says.

(1)

(Total for Question 1 is 5 marks)

- 2 The length,  $L$  cm, of a line is measured as 13 cm correct to the nearest centimetre.

Complete the following statement to show the range of possible values of  $L$

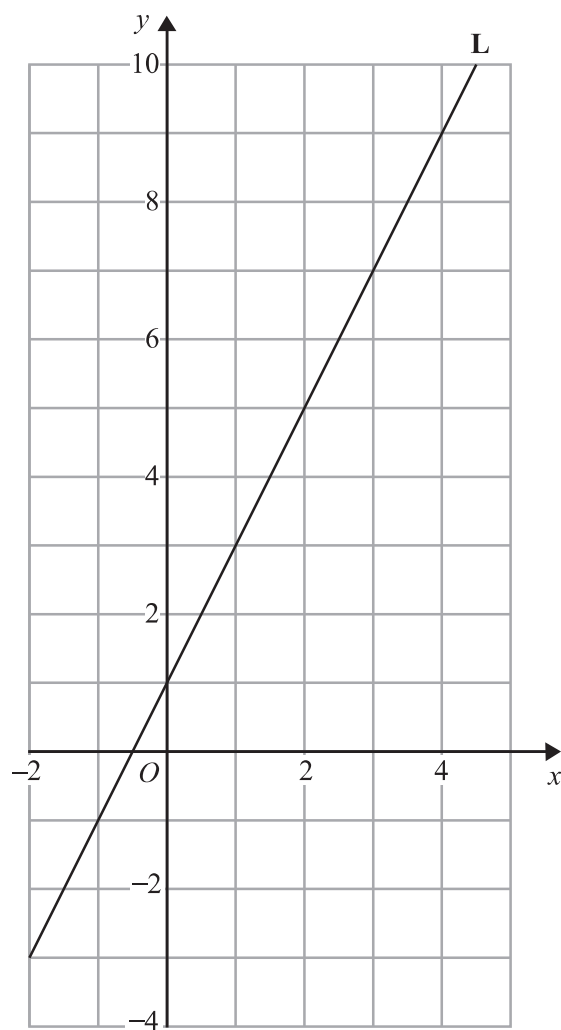
.....  $\leq L <$  .....

(Total for Question 2 is 2 marks)



S 4 9 8 2 0 A 0 3 2 0

3 Line L is drawn on the grid below.



Find the equation for the straight line L.  
Give your answer in the form  $y = mx + c$

(Total for Question 3 is 3 marks)



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

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DO NOT WRITE IN THIS AREA

4 Jenny works in a shop that sells belts.

The table shows information about the waist sizes of 50 customers who bought belts from the shop in May.

Belt size	Waist ( $w$ inches)	Frequency
Small	$28 < w \leq 32$	24
Medium	$32 < w \leq 36$	12
Large	$36 < w \leq 40$	8
Extra Large	$40 < w \leq 44$	6

(a) Calculate an estimate for the mean waist size.

.....inches  
(3)

Belts are made in sizes Small, Medium, Large and Extra Large.

Jenny needs to order more belts in June.  
The modal size of belts sold is Small.

Jenny is going to order  $\frac{3}{4}$  of the belts in size Small.

The manager of the shop tells Jenny she should **not** order so many Small belts.

(b) Who is correct, Jenny or the manager?  
You must give a reason for your answer.

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

(Total for Question 4 is 5 marks)



S 4 9 8 2 0 A 0 5 2 0

5 (a) Simplify  $n^3 \times n^5$

.....  
(1)

(b) Simplify  $\frac{c^3d^4}{c^2d}$

.....  
(2)

(c) Solve  $\frac{5x}{2} > 7$

.....  
(2)

(Total for Question 5 is 5 marks)



- 6 Andy cycles a distance of 30 km at an average speed of 24 km/h.  
He then runs a distance of 12 km at an average speed of 8 km/h.

Work out the total time Andy takes.  
Give your answer in hours and minutes.

..... hours ..... minutes

(Total for Question 6 is 3 marks)

- 7 A number,  $m$ , is rounded to 1 decimal place.  
The result is 9.4

Complete the error interval for  $m$ .

.....  $\leq m <$  .....

(Total for Question 7 is 2 marks)



- 8 Maisie knows that she needs 3 kg of grass seed to make a rectangular lawn 5 m by 9 m.

Grass seed is sold in 2 kg boxes.

Maisie wants to make a rectangular lawn 10 m by 14 m.

She has 5 boxes of grass seed.

- (a) Has Maisie got enough grass seed to make a lawn 10 m by 14 m?  
You must show all your working.

(4)

Maisie opens the 5 boxes of grass seed.

She finds that 4 of the boxes contain 2 kg of grass seed.

The other box contains 1 kg of grass seed.

- (b) Does this affect whether Maisie has enough grass seed to make her lawn?  
Give a reason for your answer.

(1)

(Total for Question 8 is 5 marks)

