

# **GCSE Grade 4**

## **Maths**

## **Booklet 3**

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** (a) Expand and simplify  $(x + 5)(x - 9)$

.....  
(2)

- (b) Factorise fully  $9x^2 + 6x$

.....  
(2)

**(Total for Question 1 is 4 marks)**

- 2** (a) Use your calculator to work out  $\frac{29^2 - 4.6}{\sqrt{35 - 1.9^3}}$

Write down all the figures on your calculator display.

.....  
(2)

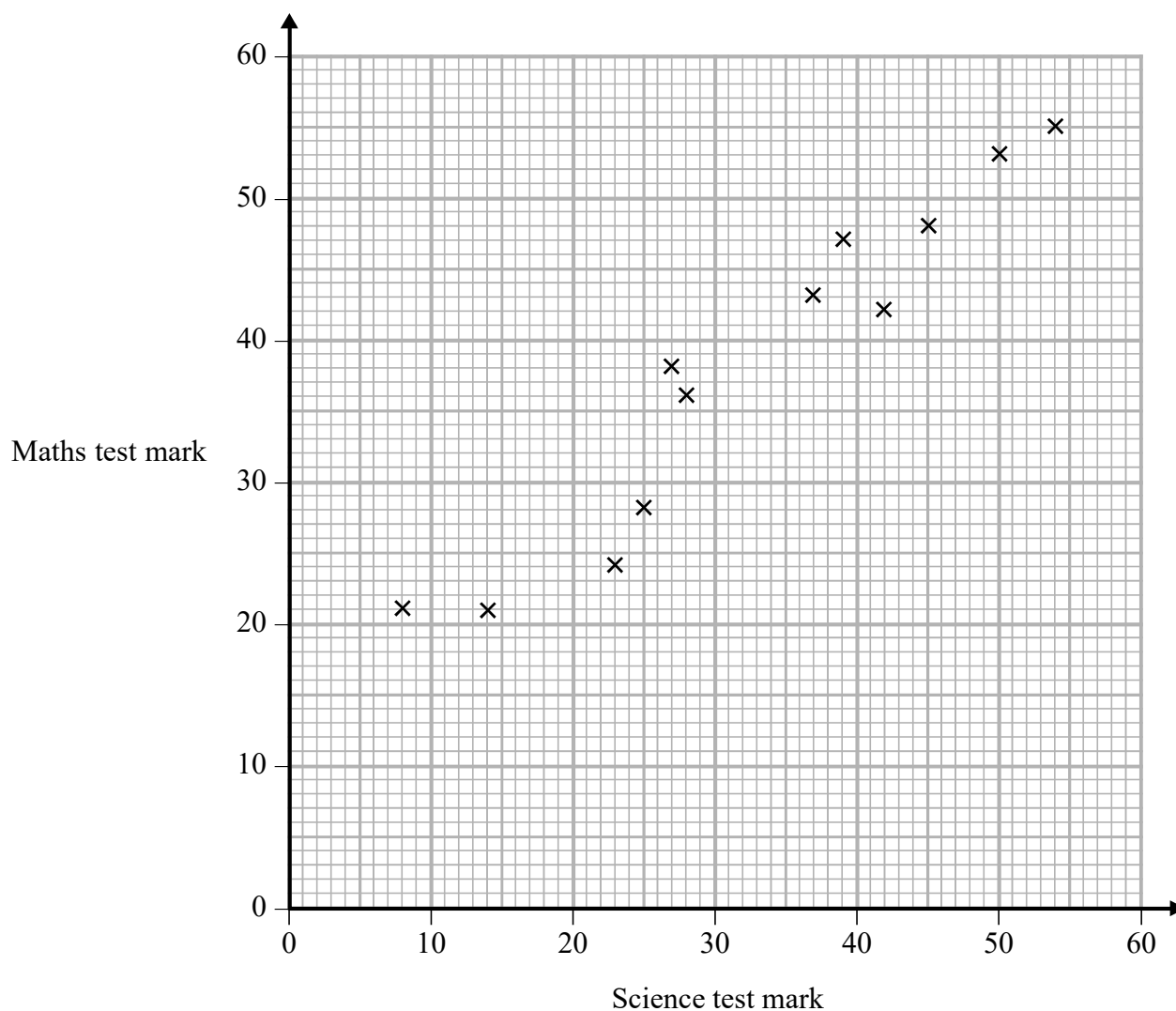
- (b) Write your answer to part (a) correct to 4 significant figures.

.....  
(1)

**(Total for Question 2 is 3 marks)**



- 3 The scatter graph shows information about the marks a group of students got in a Science test and in a Maths test.



Jamie got a mark of 34 in the Science test.

Using the scatter graph, find an estimate for Jamie's mark in the Maths test.

(Total for Question 3 is 2 marks)



- 4 The table gives information about the times taken, in seconds, by 18 students to run a race.

| Time ( $t$ seconds) | Frequency |
|---------------------|-----------|
| $5 < t \leq 10$     | 1         |
| $10 < t \leq 15$    | 2         |
| $15 < t \leq 20$    | 7         |
| $20 < t \leq 25$    | 8         |

Work out an estimate for the mean time.  
Give your answer correct to 3 significant figures.

..... seconds

(Total for Question 4 is 3 marks)

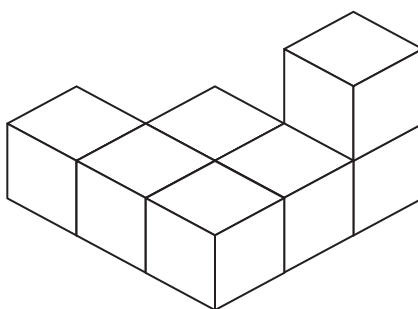


- 5 The ratio of the number of boys to the number of girls in a school is 4:5  
There are 95 girls in the school.

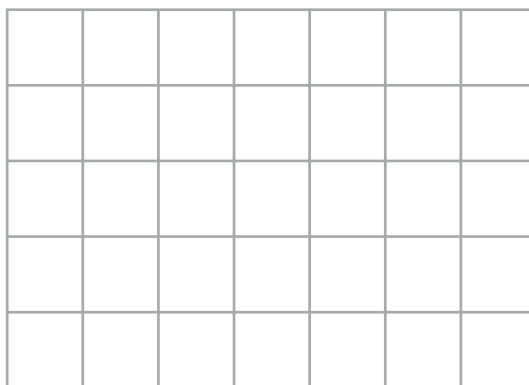
Work out the total number of students in the school.

(Total for Question 5 is 3 marks)

- 6 The diagram represents a solid made from seven centimetre cubes.



On the centimetre grid below, draw a plan of the solid.



(Total for Question 6 is 2 marks)

- 7 Make  $t$  the subject of the formula  $y = \frac{t}{3} - 2a$

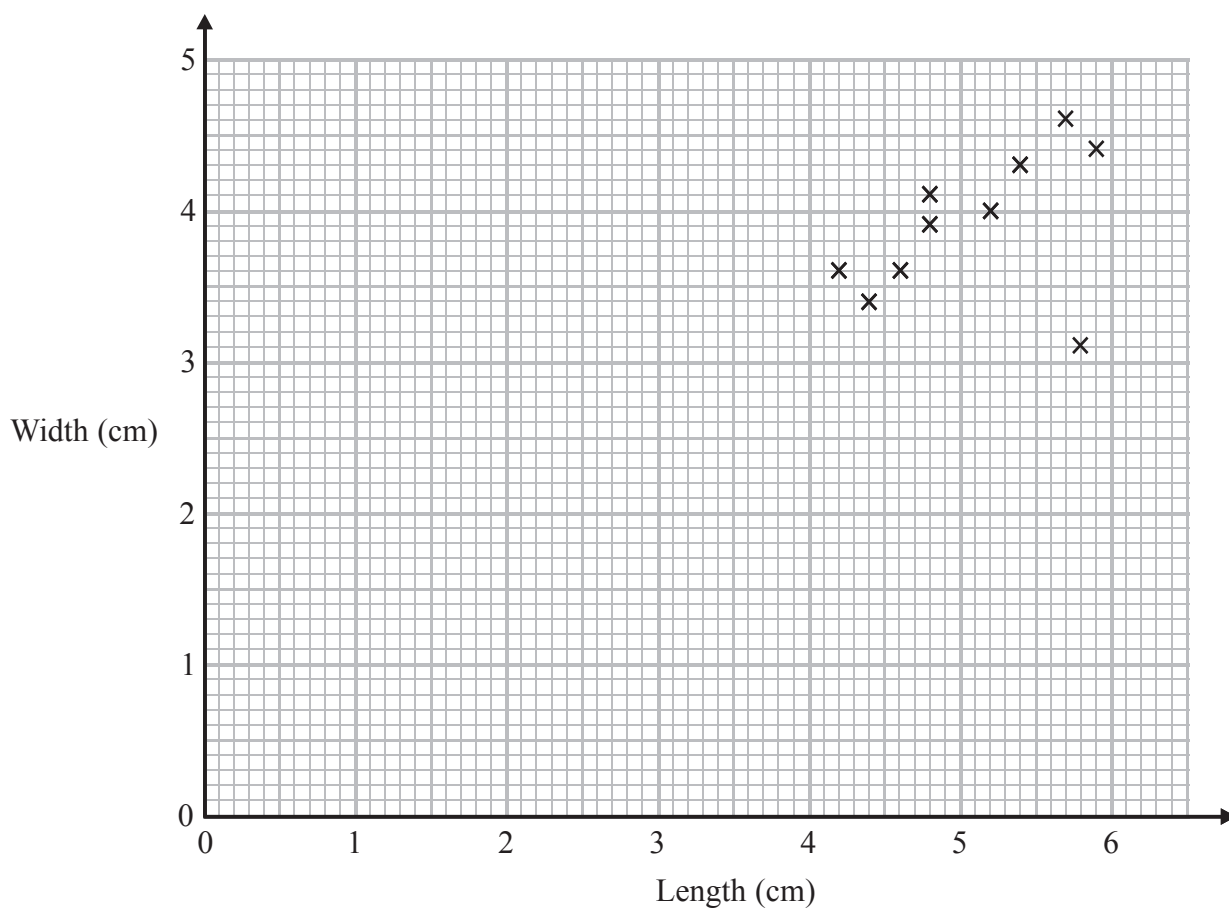
(Total for Question 7 is 2 marks)

- 8 Jim rounds a number,  $x$ , to one decimal place.  
The result is 7.2

Write down the error interval for  $x$ .

(Total for Question 8 is 2 marks)

- 9 Katie measured the length and the width of each of 10 pine cones from the same tree. She used her results to draw this scatter graph.



- (a) Describe one improvement Katie can make to her scatter graph.

(1)

The point representing the results for one of the pine cones is an outlier.

- (b) Explain how the results for this pine cone differ from the results for the other pine cones.

(1)

(Total for Question 9 is 2 marks)