

Mock Grade 4

Maths

Booklet 5

Paper 3H
Calculator

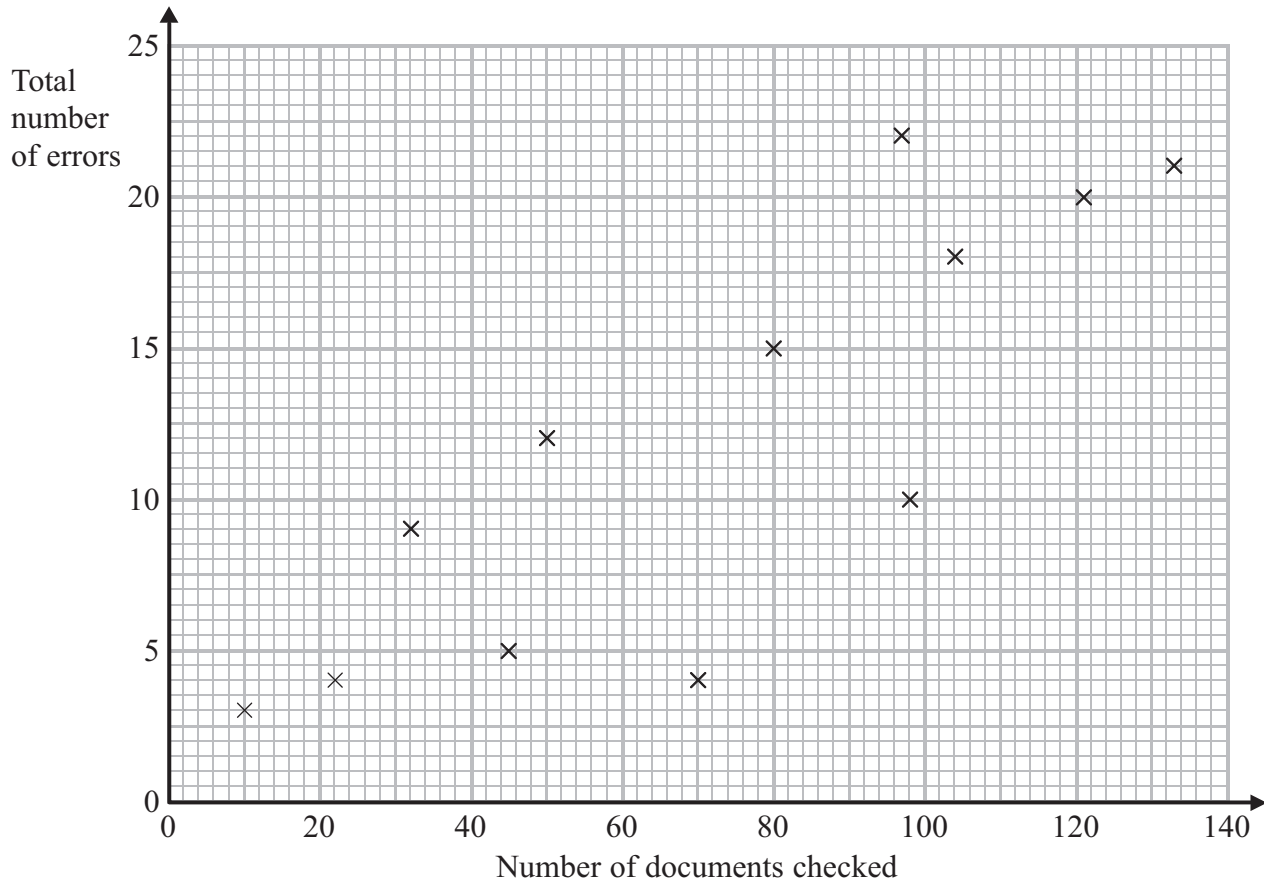
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1 A publisher checks documents for errors.

He records the number of documents that are checked each day.

He also records the total number of errors in the documents each day.

The scatter graph shows this information.



On another day 90 documents are checked.

There is a total of 17 errors.

(a) Show this information on the scatter graph.

(1)

(b) Describe the correlation between the number of documents checked and the total number of errors.

(1)

One day 110 documents are checked.

(c) Estimate the total number of errors in these documents

(2)

(Total for Question 1 is 4 marks)

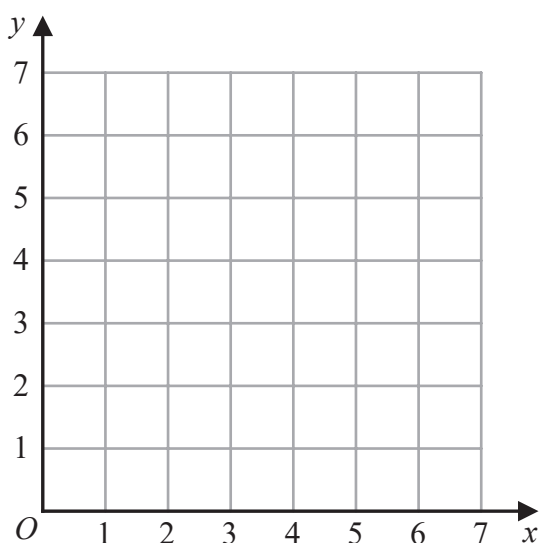
2 The length, L cm, of a line is measured as 28 cm correct to the nearest centimetre.

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

$$\dots\dots\dots \leq L < \dots\dots\dots$$

(Total for Question 2 is 2 marks)

3



(a) On the grid, draw and **label** the straight line with equation

(i) $x = 1.5$

(ii) $y = x$

(iii) $x + y = 6$

(3)

(b) Show, by shading on the grid, the region that satisfies **all three** of the inequalities

$$x \geq 1.5$$

$$y \geq x$$

$$x + y \leq 6$$

Label the region **R**.

(1)

(Total for Question 3 is 4 marks)

- 4 Sumeet records the times, in minutes, for 40 runners to finish a half marathon.

Information about these times is shown in the table.

Time (t minutes)	Frequency
$60 < t \leq 90$	10
$90 < t \leq 120$	14
$120 < t \leq 150$	9
$150 < t \leq 180$	5
$180 < t \leq 210$	2

Calculate an estimate for the mean time.

..... minutes

(Total for Question 4 is 4 marks)

5 (a) Simplify $(2m^2)^4$

.....
(1)

(b) Simplify $\frac{16m^7n^3}{4m^3n}$

.....
(2)

(c) Solve $4(2x + 1) > 9$

.....
(2)

(Total for Question 5 is 5 marks)

- 6 Andy cycles a distance of 50 km at an average speed of 32 km/h.
He then runs a distance of 19 km at an average speed of 16 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 2 decimal places.
The result is 7.81

Complete the error interval for m .

..... $\leq m <$

(Total for Question 7 is 2 marks)

- 8 Maisie knows that she needs 7 kg of grass seed to make a rectangular lawn 14 m by 8 m.

Grass seed is sold in 2 kg boxes.

Maisie wants to make a rectangular lawn 15 m by 22 m.

She has 11 boxes of grass seed.

- (a) Has Maisie got enough grass seed to make a lawn 15 m by 22 m?
You must show all your working.

(4)

Maisie opens the 11 boxes of grass seed.

She finds that 10 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)