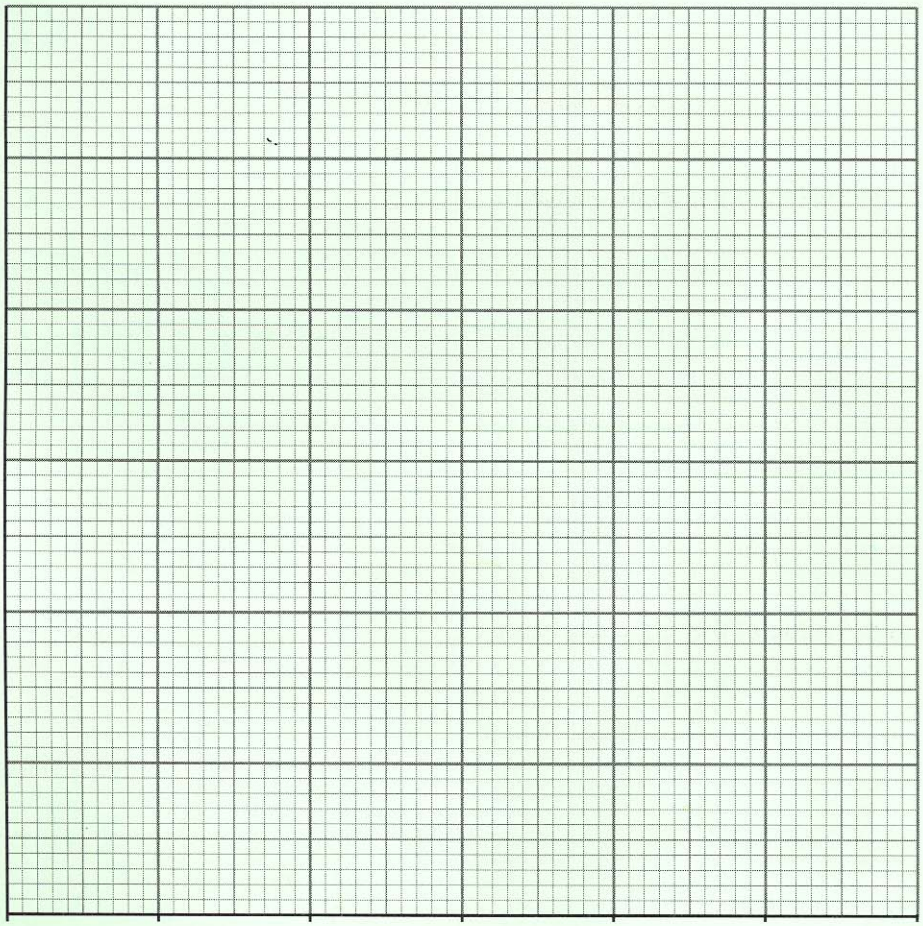
10. The lengths, in millimetres, of 300 engine bolts were measured. The table shows a grouped frequency distribution of the results.

Length (x mm)	$48 < x \leqslant 49$	$49 < x \leqslant 50$	$50 < x \leqslant 51$	$51 < x \leqslant 52$	$52 < x \leqslant 53$
Frequency	12	102	86	76	24

(a) On the graph paper below, draw a grouped frequency diagram to show this data. [3]



(b) Write down the class inverval in which the median of the data will be found.

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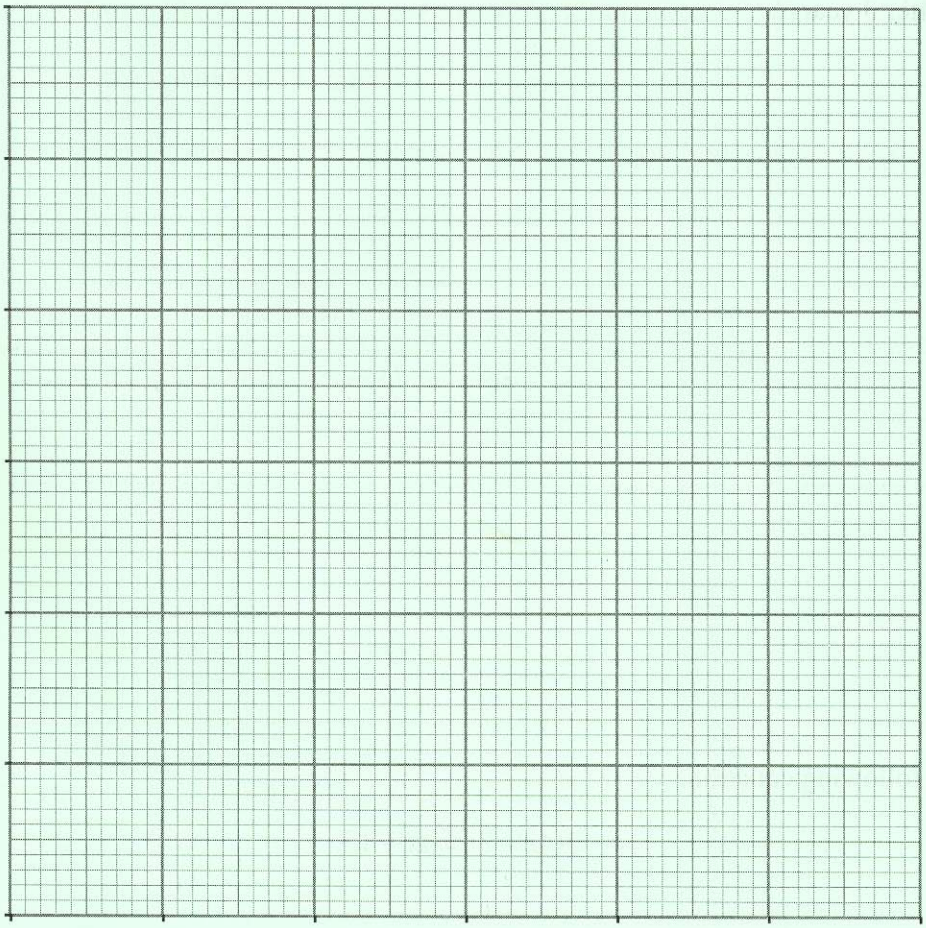
[2]

12. The marks obtained in an examination by 100 pupils were recorded. The table shows a grouped frequency distribution of the results.

Mark (x)	$0 < x \leqslant 20$	$20 < x \leqslant 40$	$40 < x \leqslant 60$	$60 < x \leqslant 80$	$80 < x \leqslant 100$
Frequency	12	25	44	10	9

On the graph paper below, draw a frequency polygon to show the data.

[3]



15. The masses of 90 pupils were measured to the nearest kilogram. The table shows a grouped frequency distribution of the results.

Mass, m (to the nearest kg)	Number of pupils
$30 \leqslant m < 40$	3
$40 \leqslant m < 50$	24
$50 \leqslant m < 60$	30
$60 \leqslant m < 70$	22
$70 \leqslant m < 80$	11

Find an estimate for the mean mass of the pupils.

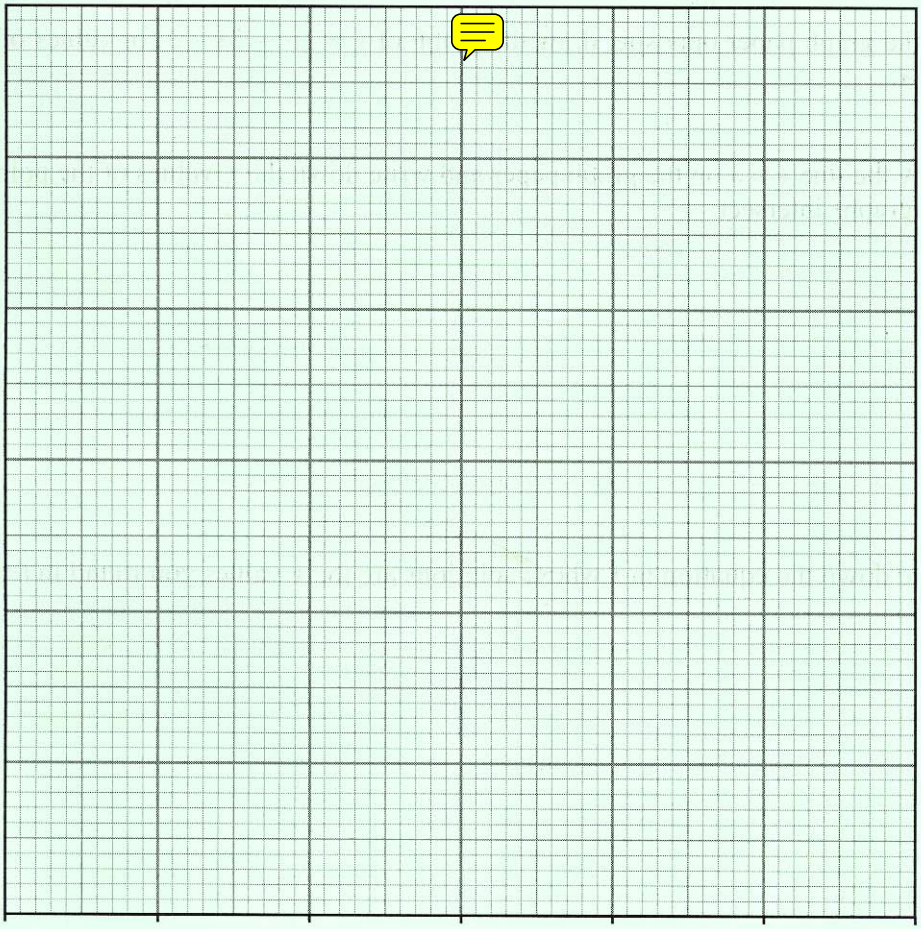
[4]

14. The heights of 70 pupils were measured to the nearest cm. The table below shows a grouped frequency distribution of the results.

Height, h (to the nearest cm)	$130 < h \leqslant 140$	$140 < h \leqslant 150$	$150 < h \leqslant 160$	$160 < h \leqslant 170$	$170 < h \leqslant 180$
Frequency	8	15	24	13	10

On the graph paper below, draw a frequency polygon to show this data.

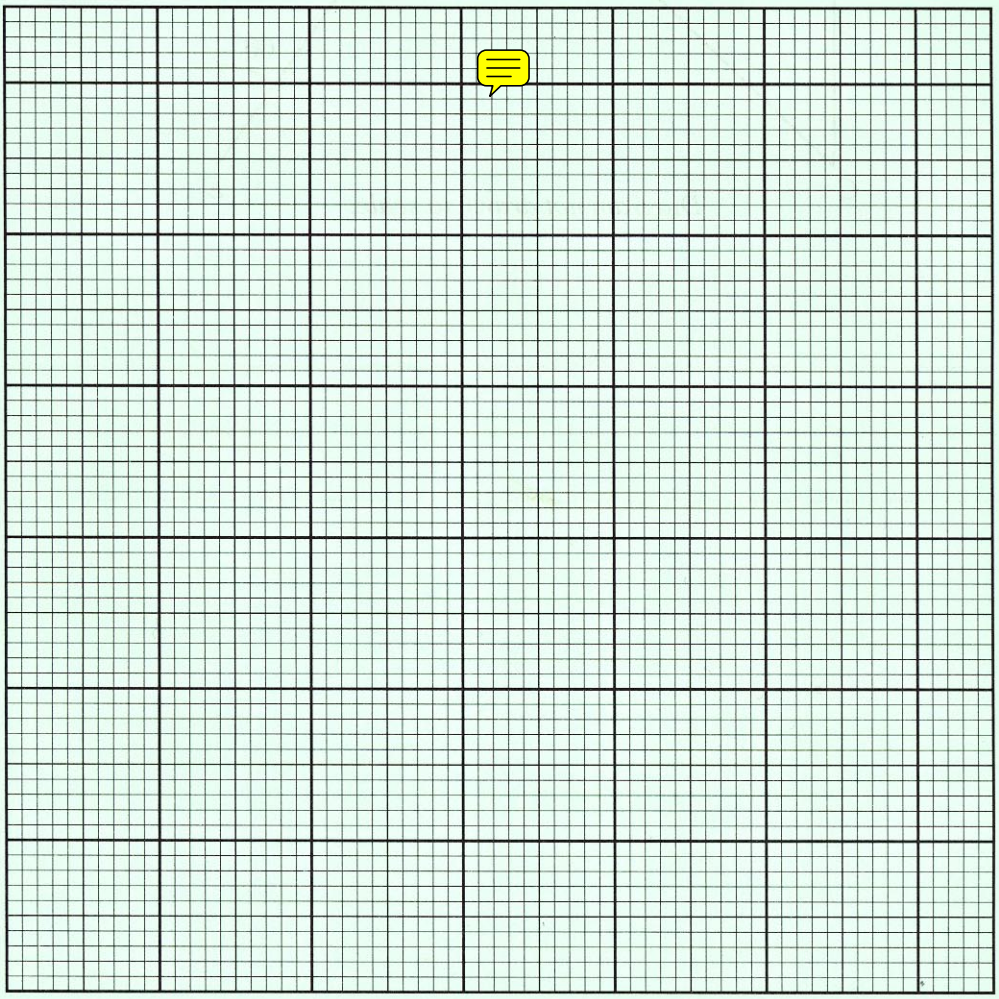
[3]



9. The weights of eighty eggs were measured and the results are summarised in the following table.

Weight (grams)	Number of eggs
$50 \leqslant \text{weight} < 60$	7
$60 \leqslant \text{weight} < 70$	13
$70 \leqslant \text{weight} < 80$	29
$80 \leqslant \text{weight} < 90$	20
$90 \leqslant \text{weight} < 100$	11

(a) On the graph paper below, draw a grouped frequency diagram for the data. [3]



(b) Write down the modal class.

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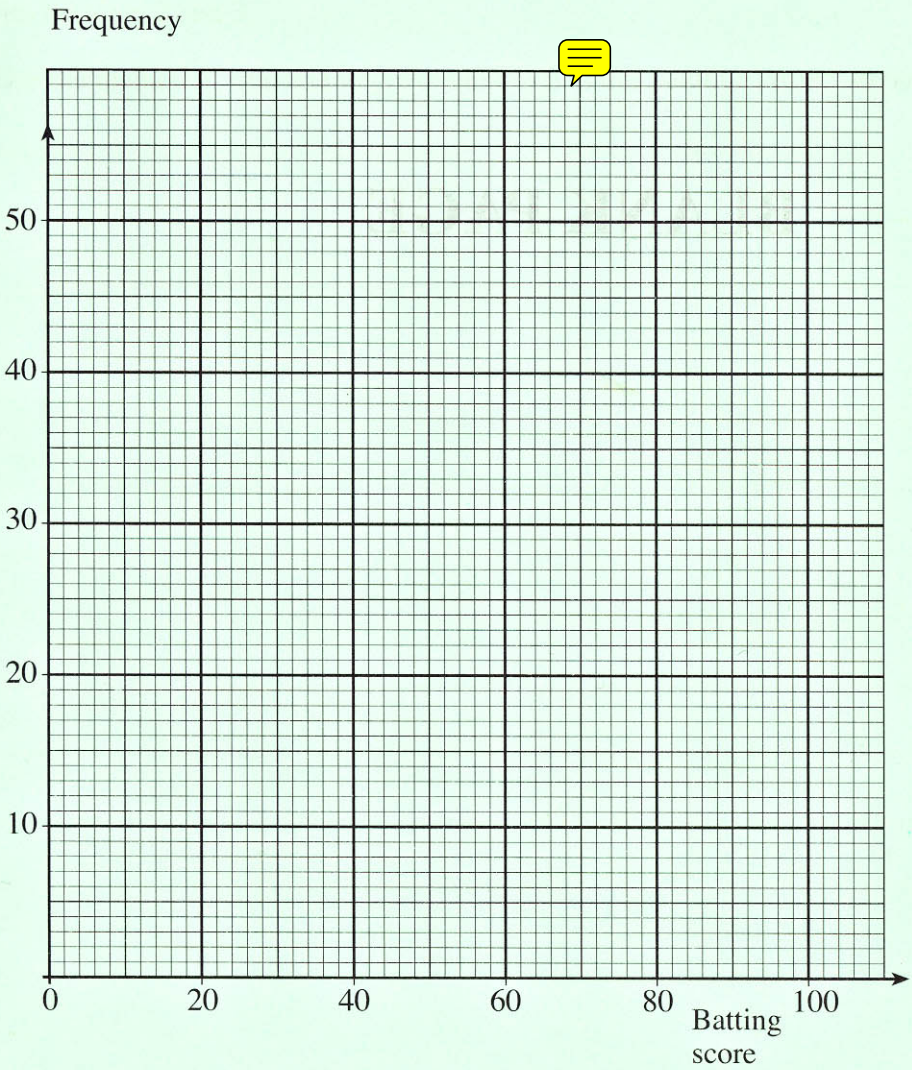
[1]

16. *(a)* The batting scores of 100 cricketers were recorded and the results are summarised in the following table.

Batting score	Frequency
0 - 19	20
20 - 39	45
40 - 59	24
60 - 79	9
80 - 99	2

On the graph paper, below draw a frequency polygon for the data. [2]



(b) Find an estimate for the mean of the batting scores.

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[4]

12. The speeds of 120 cars on a stretch of motorway were measured and the following results were obtained.

Speed, s (m.p.h.)	Number of cars
$30 \leqslant s < 40$	6
$40 \leqslant s < 50$	24
$50 \leqslant s < 60$	30
$60 \leqslant s < 70$	45
$70 \leqslant s < 80$	12
$80 \leqslant s < 90$	3

(a) Write down the modal class.

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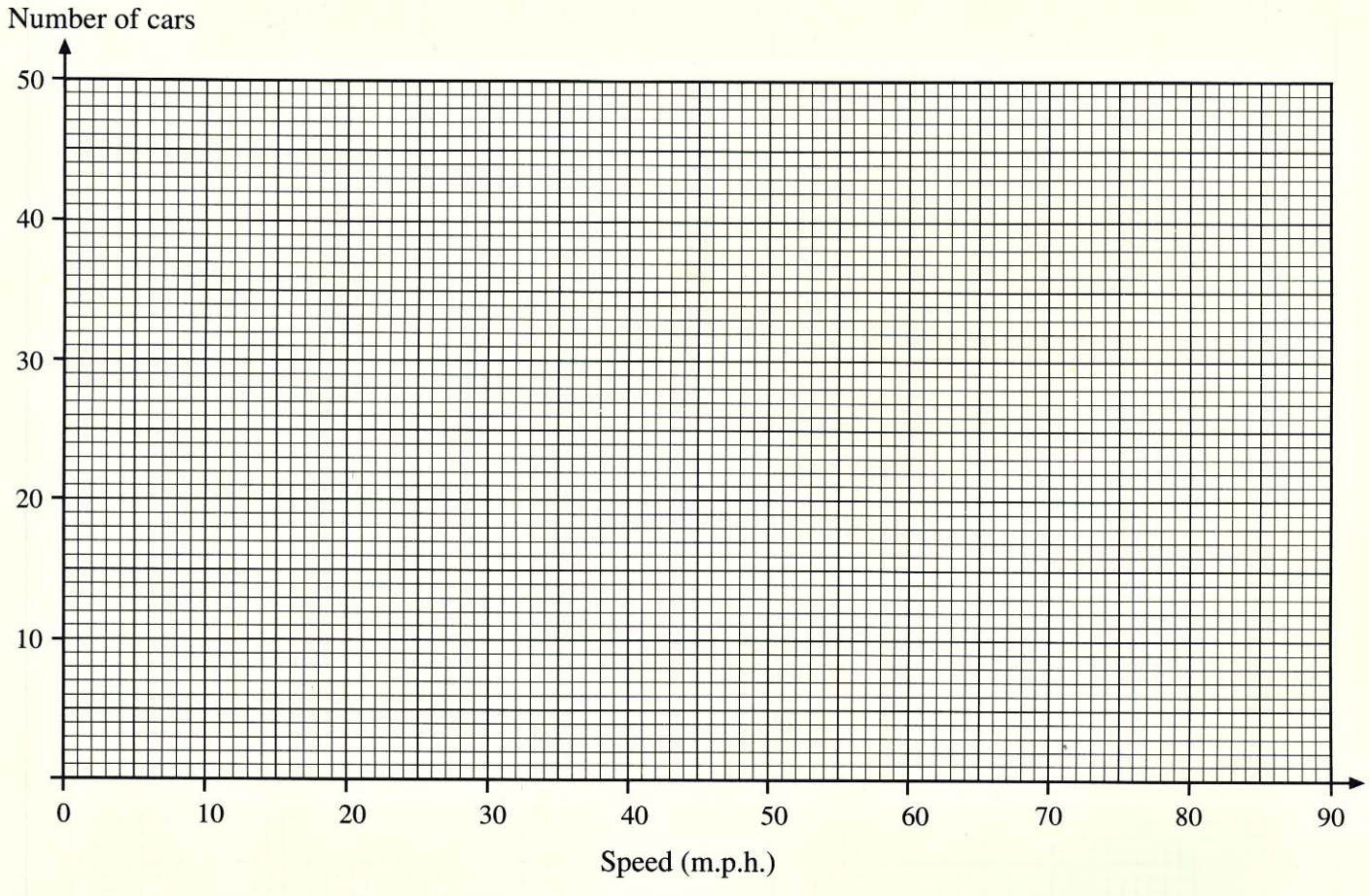
[1]

(b) On the graph paper below, draw a grouped frequency diagram for the data. [2]



(c) Find an estimate for the mean speed of the cars.

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[4]