



Aberdare Community School
Mathematics Department

WJEC GCSE
Higher – Non Calculator
Data

Frequency diagrams and polygons

Name:

Set:

Date:

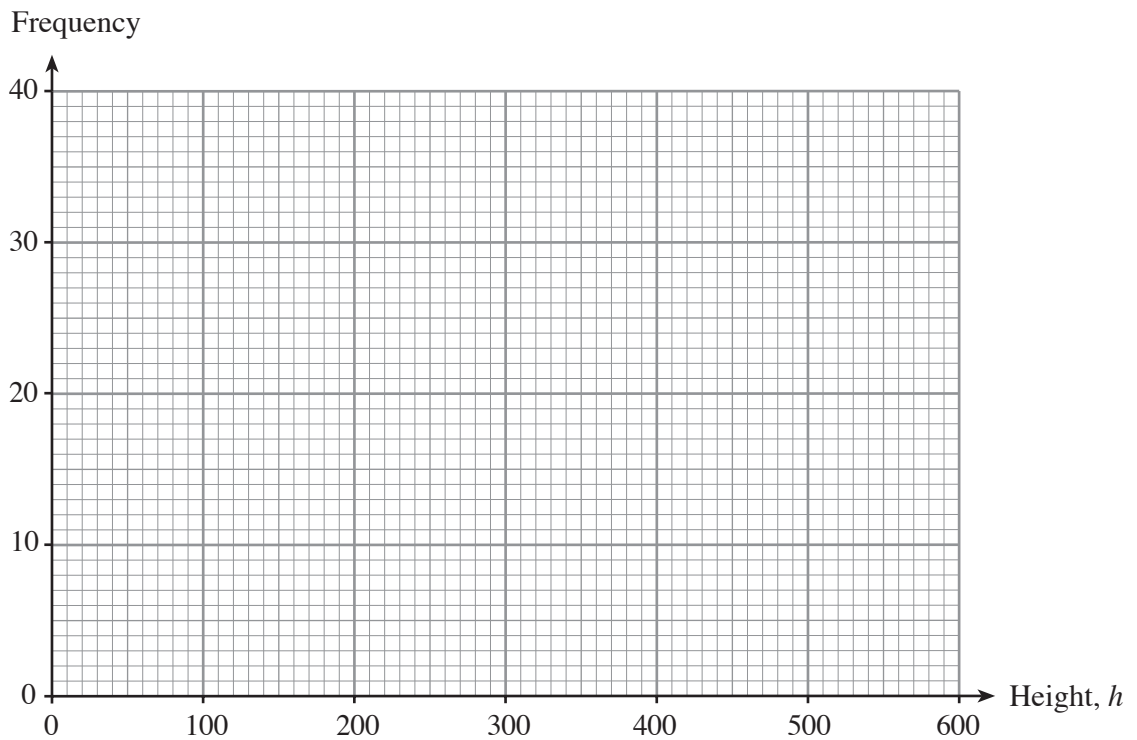
Teacher:

11. The heights of 100 trees were measured. The table below shows a grouped frequency distribution of the results.

Height, h	$100 < h \leq 200$	$200 < h \leq 300$	$300 < h \leq 400$	$400 < h \leq 500$	$500 < h \leq 600$
Frequency	6	20	34	30	10

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

[2]

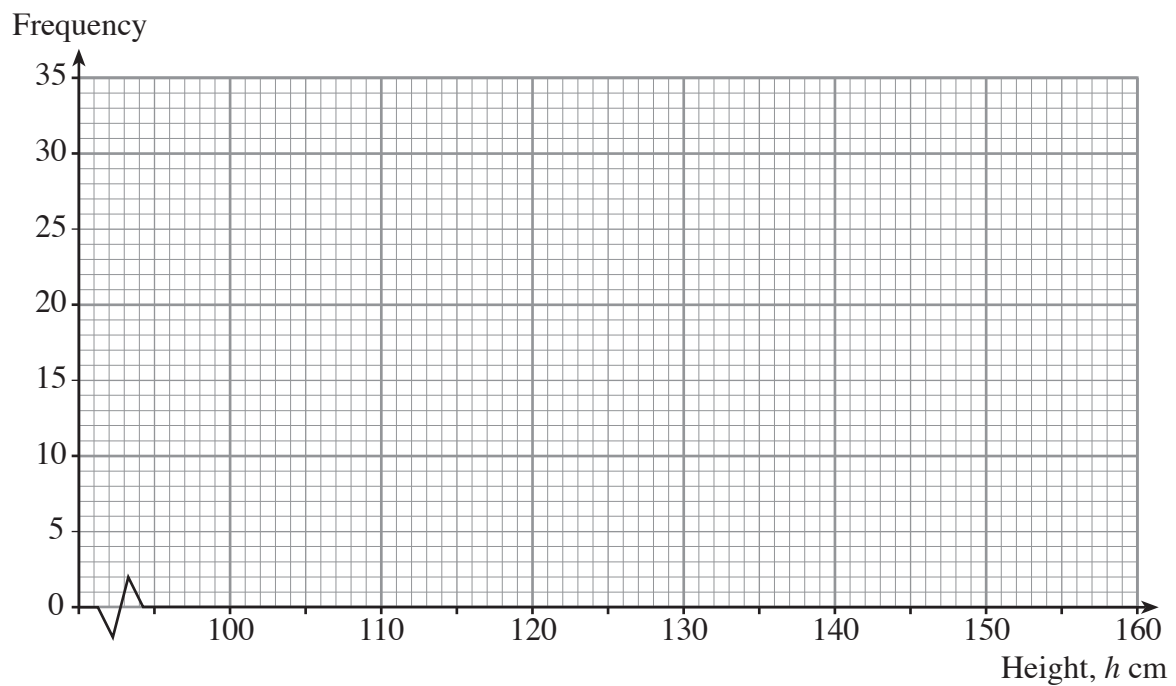


9. The heights of 70 children were measured in centimetres. The table below shows a grouped frequency distribution of the results.

Height, h cm	$100 < h \leq 110$	$110 < h \leq 120$	$120 < h \leq 130$	$130 < h \leq 140$	$140 < h \leq 150$
Frequency	4	10	18	30	8

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

[2]



- (b) State which class interval contains the median.

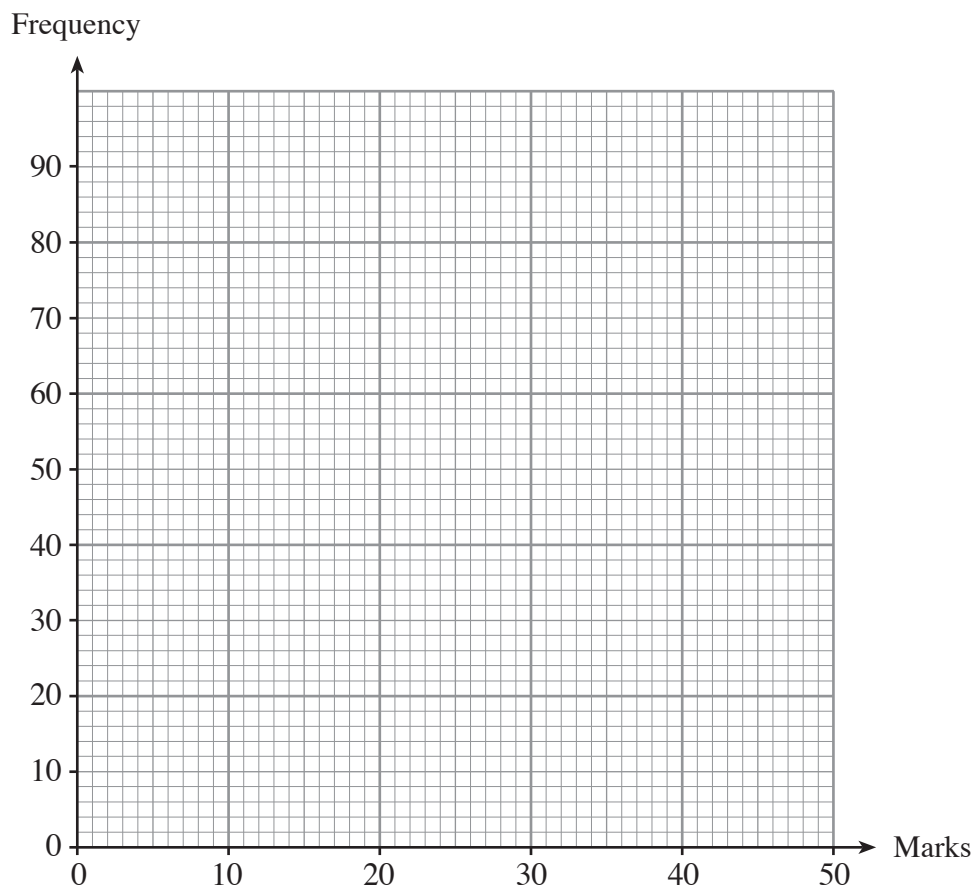
[1]

- (b) The marks obtained in a test by 160 students were recorded. The table shows a grouped frequency distribution of the results.

Mark	1 to 10	11 to 20	21 to 30	31 to 40	41 to 50
Frequency	16	50	76	10	8

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

[2]

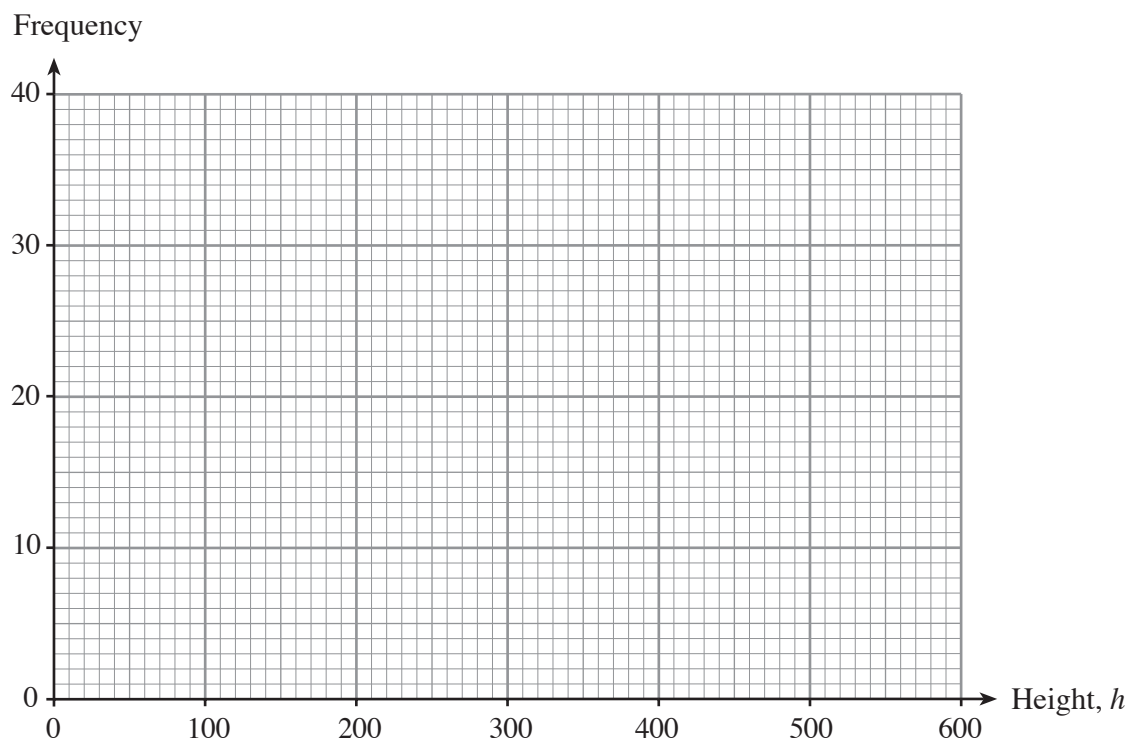


10. The heights of 100 trees were measured. The table below shows a grouped frequency distribution of the results.

Height, h	$100 < h \leq 200$	$200 < h \leq 300$	$300 < h \leq 400$	$400 < h \leq 500$	$500 < h \leq 600$
Frequency	6	20	34	30	10

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

[2]

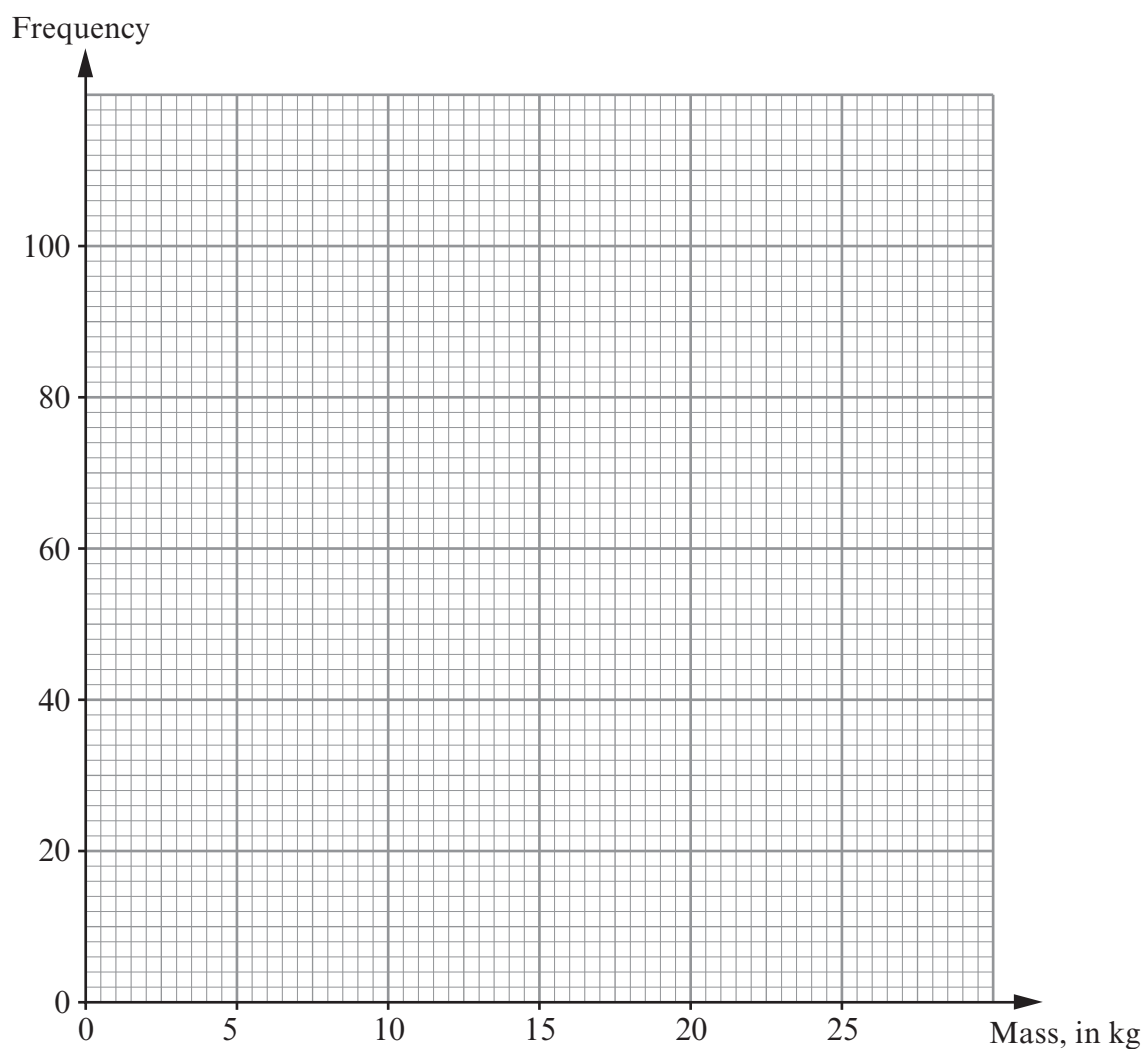


8. (a) The total mass of tomatoes, in kg, produced by each of 200 plants in a greenhouse was measured.
The table shows the grouped frequency distribution for the total mass of tomatoes on each of these 200 plants.

Mass, x kg	$0 < x \leq 5$	$5 < x \leq 10$	$10 < x \leq 15$	$15 < x \leq 20$	$20 < x \leq 25$
Frequency	6	20	70	88	16

- (i) On the graph paper below, draw a frequency diagram to show this data.

[2]



- (ii) State which class interval contains the median.

[1]

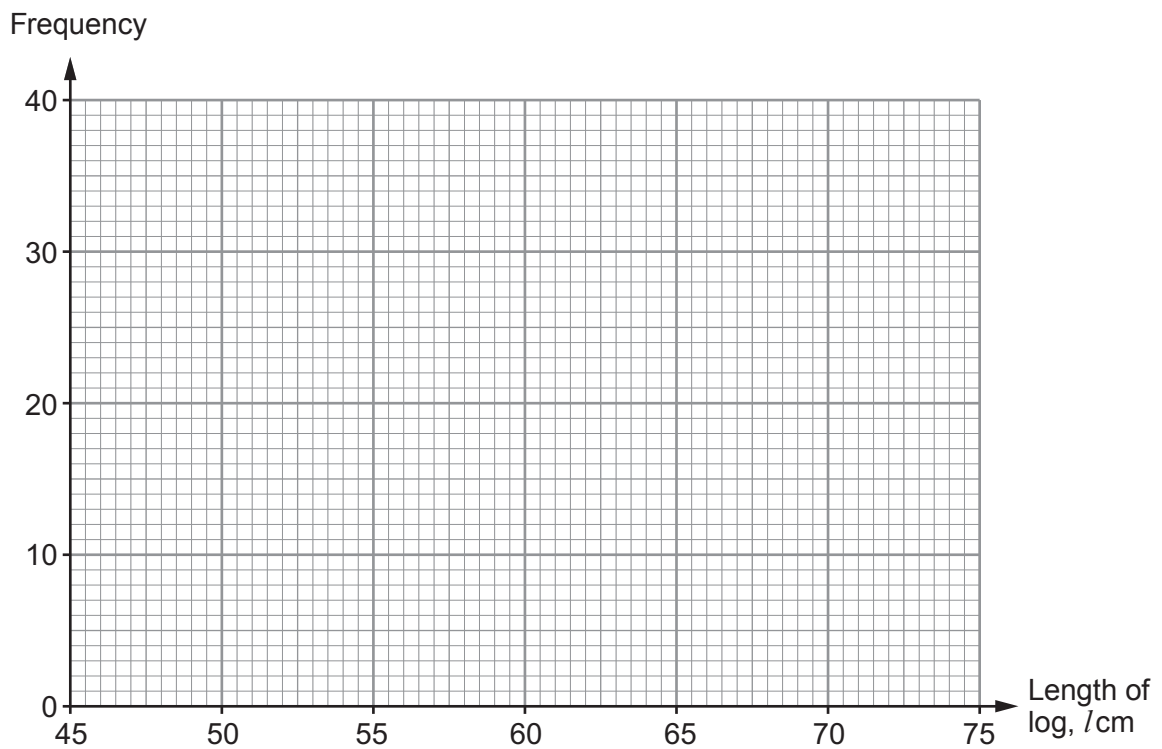


2. Tom collected 100 logs and measured their lengths in centimetres.

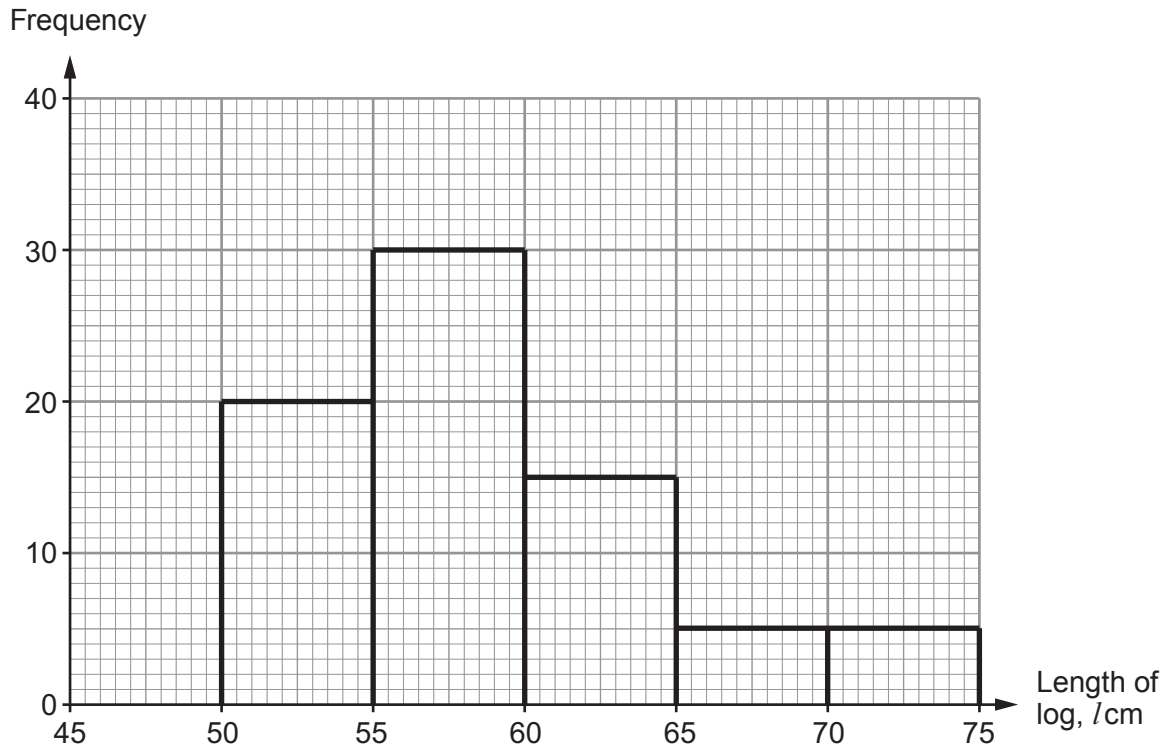
The table below shows a grouped frequency distribution of his results.

Length of log, l cm	$50 < l \leq 55$	$55 < l \leq 60$	$60 < l \leq 65$	$65 < l \leq 70$	$70 < l \leq 75$
Frequency	4	18	38	30	10

(a) On the graph paper below, draw a grouped frequency diagram to show this data. [2]



- (b) Billy also collected and measured the lengths of some logs. The grouped frequency diagram of his results is shown below.



- (i) How many logs did Billy collect and measure? [1]

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- (ii) Was it Tom or Billy who collected the longer logs, on average? [1]

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Explain how the grouped frequency diagrams help you to decide.

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