



Aberdare Community School  
Mathematics Department

WJEC GCSE  
**Foundation – Non Calculator**  
Data

# Frequency diagrams and polygons

Name: .....

Set: .....

Date: .....

Teacher: .....

19. 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.

[3]



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

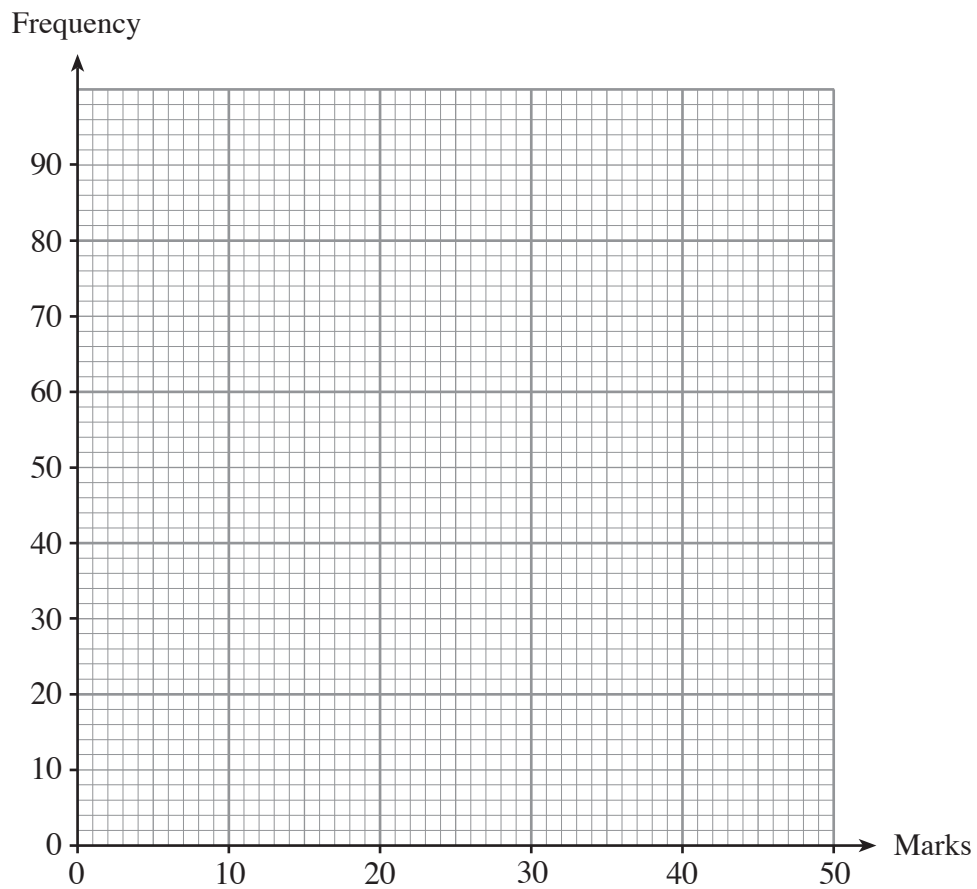
..... [1]

- (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]

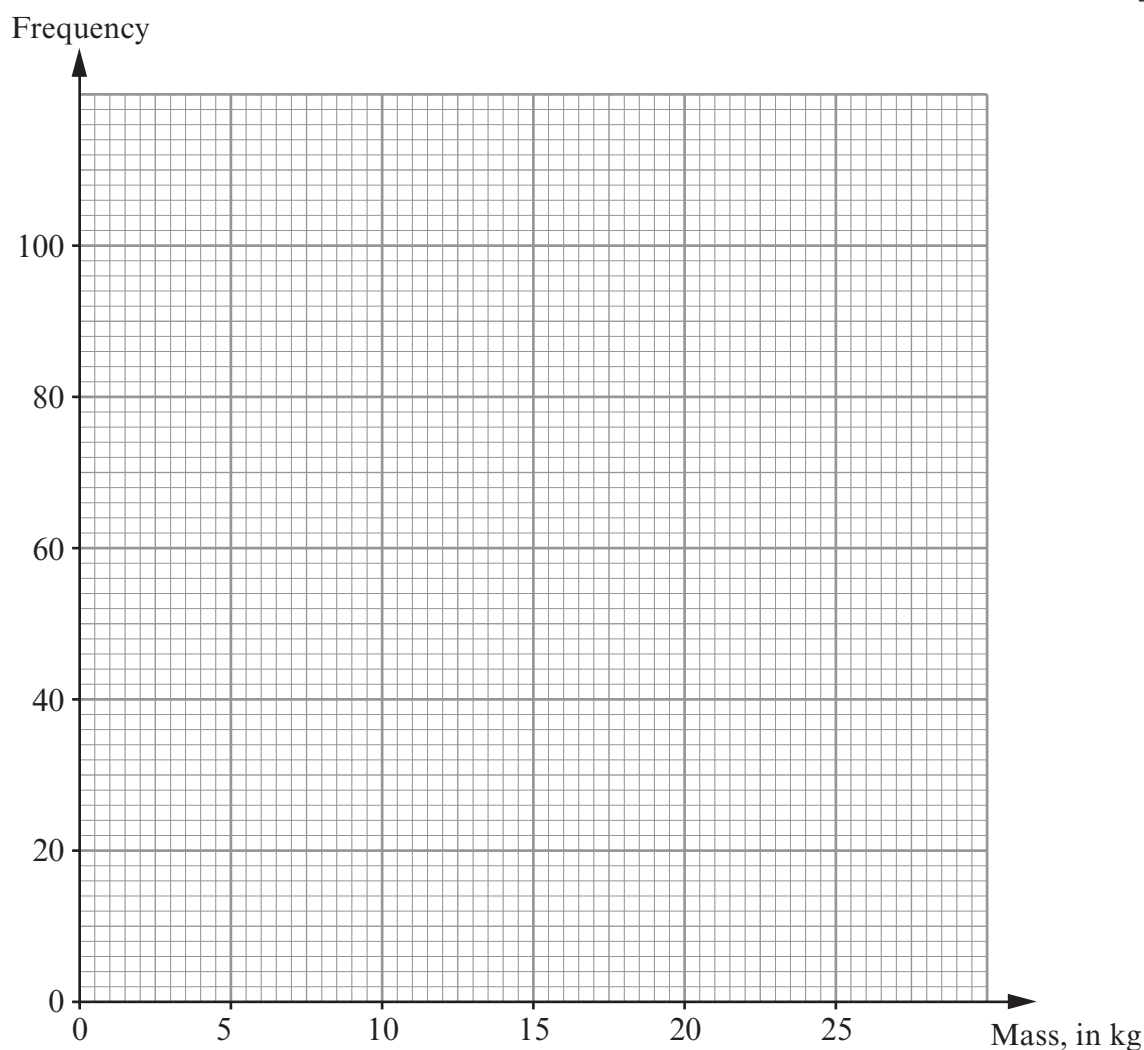


17. The total mass of tomatoes, in kg, produced by each of 200 plants in a greenhouse was measured.  
The table shows the grouped frequency distribution for the total mass of tomatoes on each of these 200 plants.

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

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

[2]



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

..... [1]

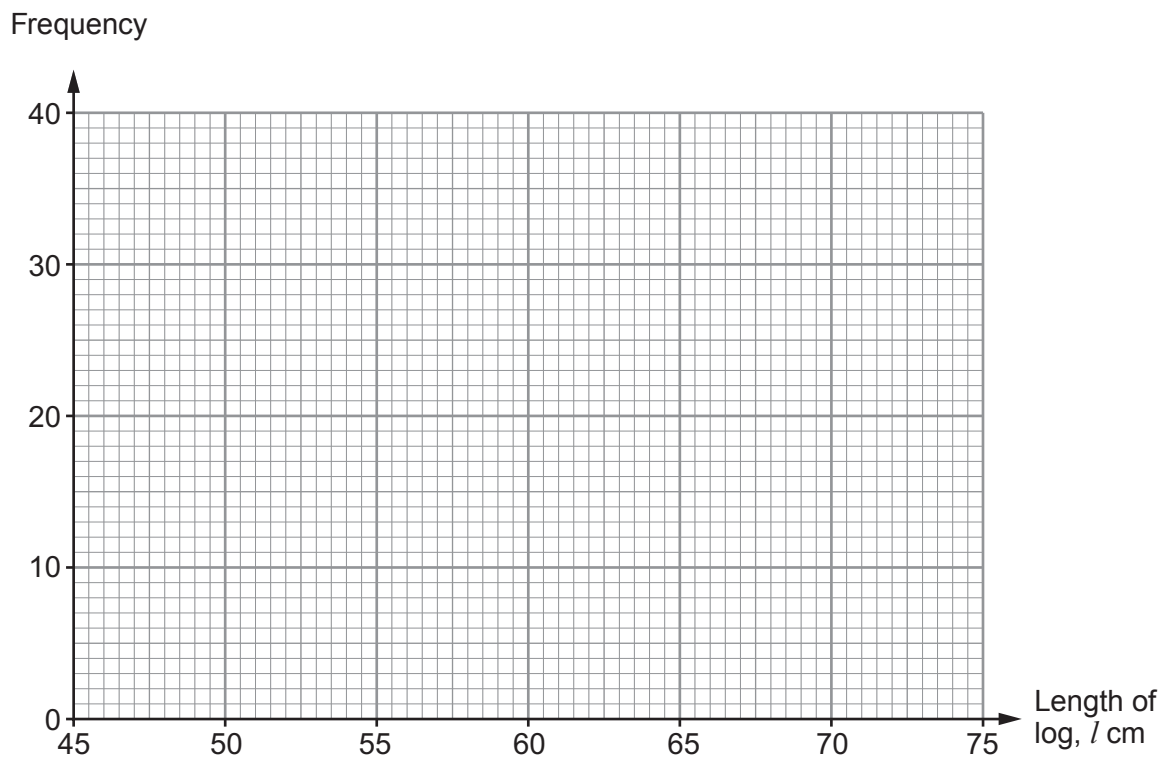


14. Tom collected 100 logs and measured their lengths in centimetres.

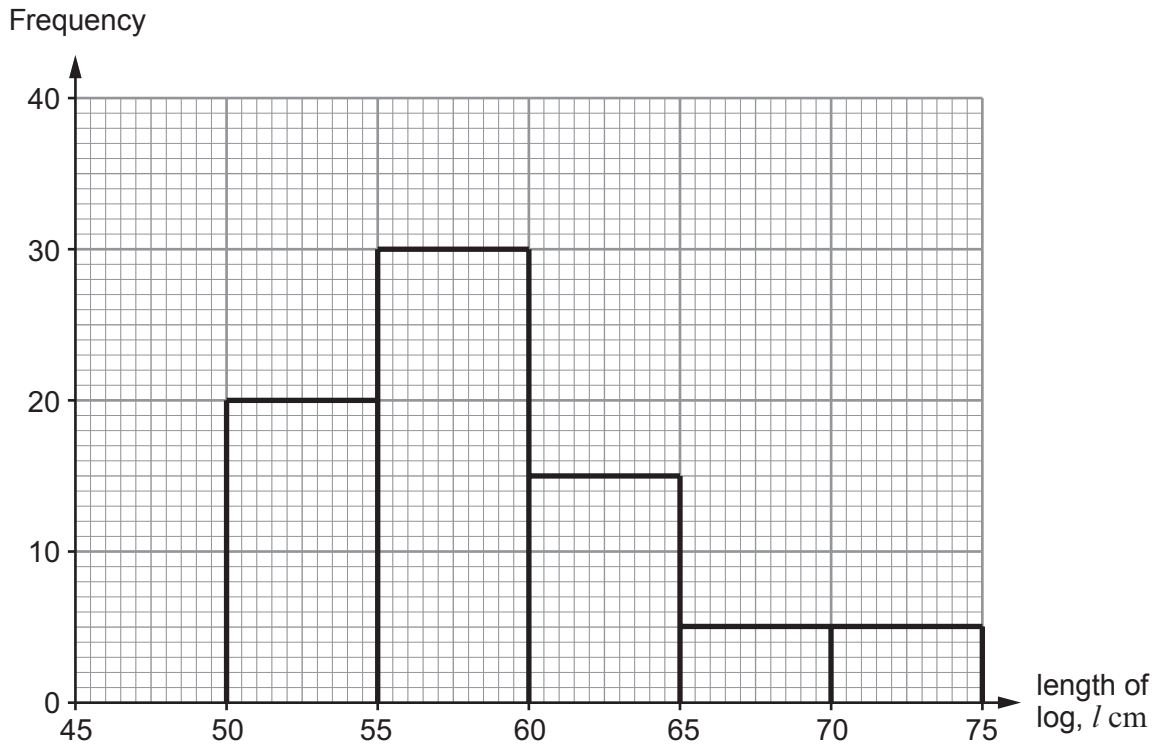
The table below shows a grouped frequency distribution of his results.

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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