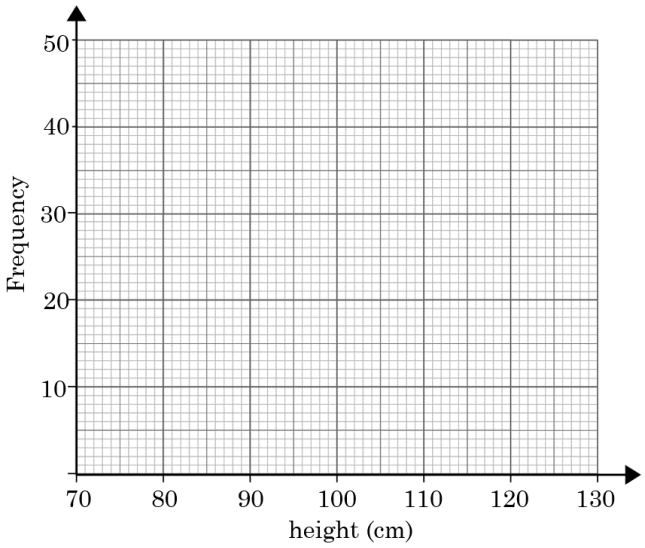
Frequency Polygons Exam Practice

Q1. The table below shows the height of some plants measured in cm.

Height of plant (to nearest cm)	Frequency
$70 \leq h < 80$	8
$80 \leq h < 90$	27
$90 \leq h < 100$	45
$100 \leq h < 110$	30
$110 \leq h < 120$	13

Draw a frequency polygon on the grid opposite. **[2]**

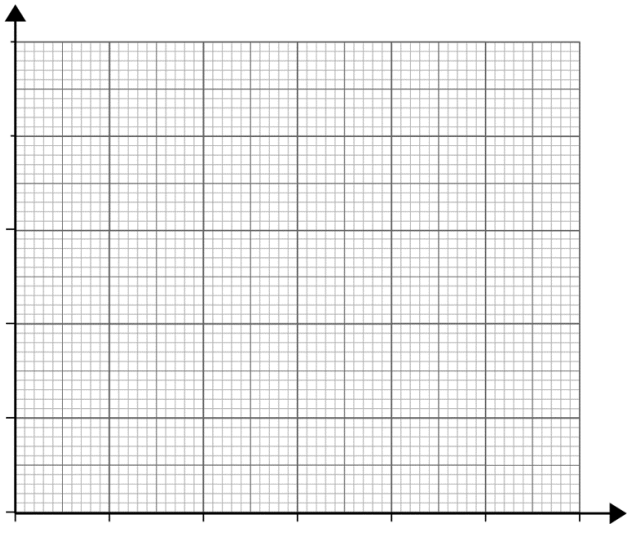


Q2. The table below shows the weight of some dogs measured in kg.

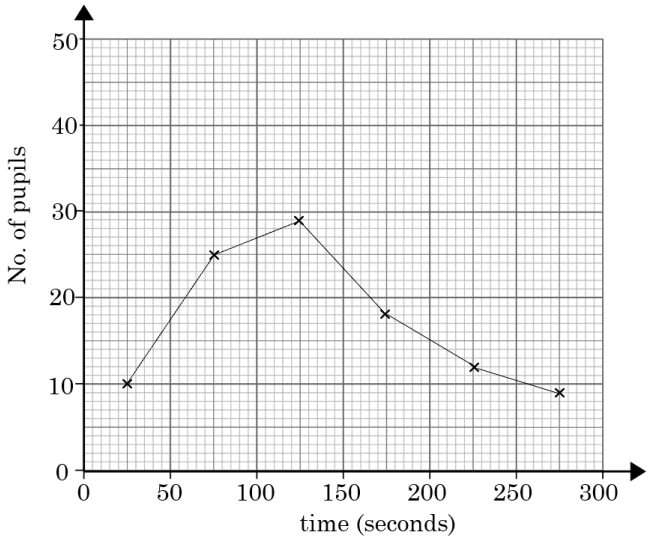
Weight of a dog (Kg)	Frequency
$10 \leq w < 30$	40
$30 \leq w < 50$	70
$50 \leq w < 70$	115
$70 \leq w < 90$	165
$90 \leq w < 110$	20

Draw a frequency polygon on the grid opposite

[3]



Q3. The frequency polygon below shows the time in seconds for some pupils to complete a puzzle.

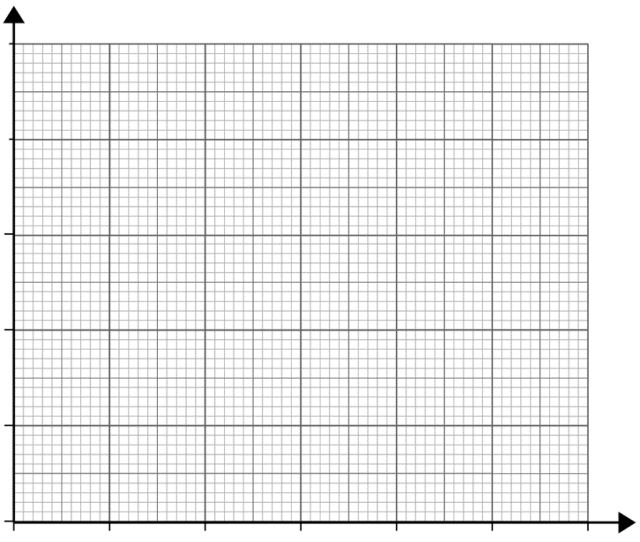


Estimate the mean time taken by the pupils to complete the puzzle.

[4]

Q4. The table below shows the height of some people measured in cm.

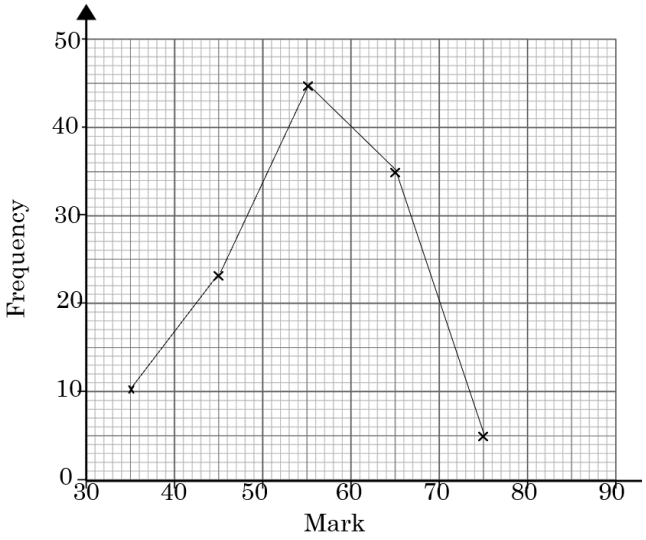
Height (cm)	Cumulative Frequency
$150 \leq h < 160$	9
$160 \leq h < 170$	24
$170 \leq h < 180$	86
$180 \leq h < 190$	130
$190 \leq h < 200$	155



Draw a frequency polygon on the grid below

[4]

Q5. The frequency polygon shows the marks scored by some boys in a history exam.



On the same grid, draw a frequency polygon for the data below, which shows the results of the girls in the same history test. [2]

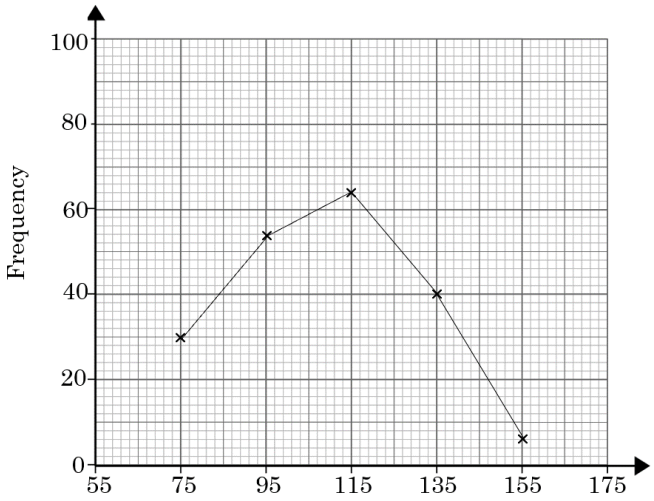
Mark	Frequency
$30 \leq m < 40$	21
$40 \leq m < 50$	34
$50 \leq m < 60$	41
$60 \leq m < 70$	19
$70 \leq m < 80$	2

Compare the scores of the boys and the girls scores in the history exam.

[2]

Q6. Fiona has collected data on the weight of pupils in year 8 at her school. She uses it to draw the frequency polygon shown opposite:

Weight of pupils in year 8 (pounds)	Frequency
$75 \leq w < 95$	30
$95 \leq w < 115$	54
$115 \leq w < 135$	62
$135 \leq w < 155$	40
$155 \leq w < 175$	6

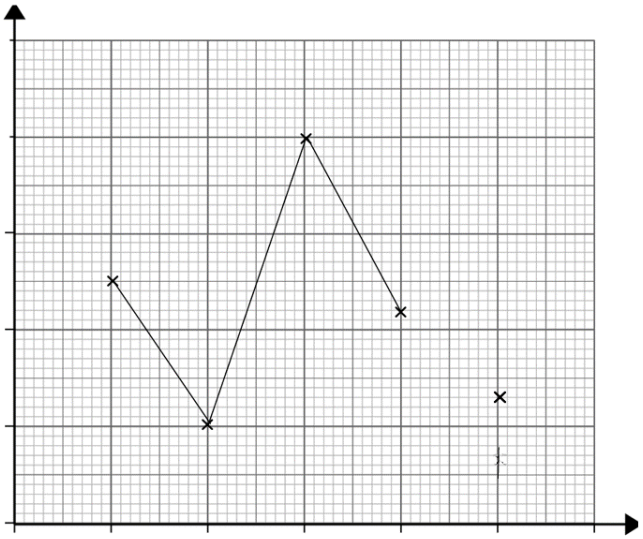


Identify three errors which she has made. [3]

Q7. The amount of rainfall (in mm) during a period of time was recorded.

a) Complete both the frequency table and the frequency polygon using the information, labelling both of the axes. [4]

Height (cm)	Cumulative Frequency
$150 \leq h < 160$	9
$160 \leq h < 170$	24
$170 \leq h < 180$	86
$180 \leq h < 190$	130
$190 \leq h < 200$	155



b) Write down the modal class. [1]

c) A day is selected at random. What is the probability that there was more than 30mm of rainfall?

[1]

Q8. Over a period of time, the maximum temperature during a day is recorded. A frequency polygon for the following incomplete data set is to be drawn.

Max Temperature (°C)	Frequency
$14 \leq w < 18$	8
$18 \leq w < 22$	14
$22 \leq w < 26$	10
$26 \leq w < 30$	

Given that the mean is 21.8 , work out the missing frequency value and plot the frequency chart on the graph below: [5]