

Frequency Polygons

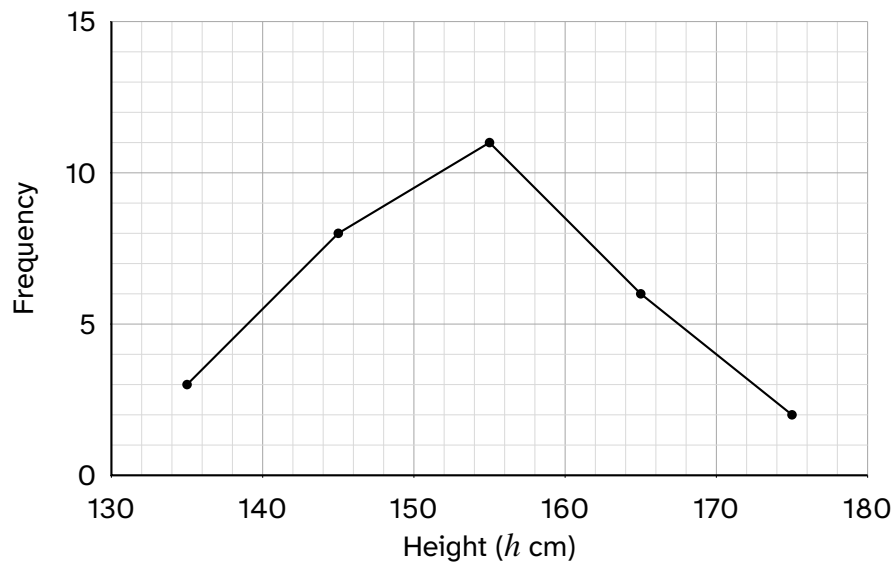
For Pearson Edexcel GCSE Mathematics (1MA1) • Foundation tier

Name _____

Total marks: **20**

Answer **all** questions in the spaces provided. Show your working: marks are given for correct method.

- 1** The frequency polygon shows information about the heights, h cm, of some students.



- (a) How many students are shown on the frequency polygon?

.....
(2)

- (b) Joe says, "The greatest height is 11, so the modal class is 11"
Explain why Joe is wrong.

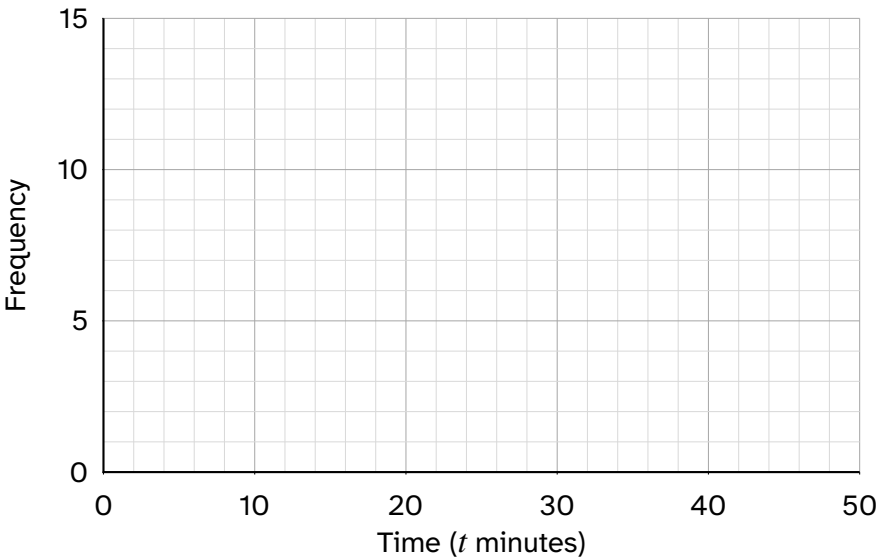
.....
.....
(1)

(Total for Question 1 is 3 marks)

- 2 The table shows information about the times, in minutes, that 35 people spent in a shop.

Time (t minutes)	Frequency
$0 < t \leq 10$	4
$10 < t \leq 20$	9
$20 < t \leq 30$	12
$30 < t \leq 40$	7
$40 < t \leq 50$	3

- (a) Draw a frequency polygon for this information.



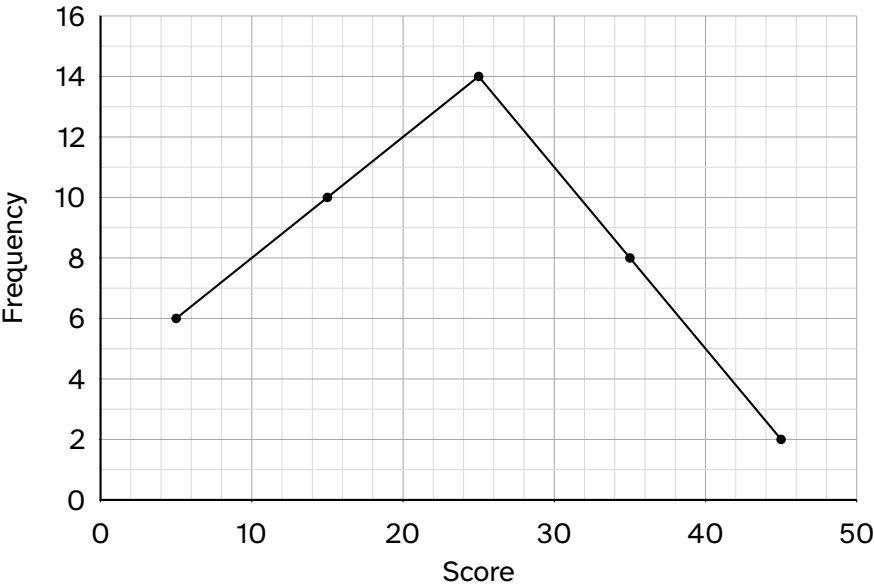
(2)

- (b) Write down the modal class.

.....
(1)

(Total for Question 2 is 3 marks)

- 3** The frequency polygon shows information about the scores, s , of some students in a quiz.
No student scored more than 50



- (a) Use the frequency polygon to complete the frequency table.

Score, s	Frequency
$0 < s \leq 10$	
$10 < s \leq 20$	
$20 < s \leq 30$	
$30 < s \leq 40$	
$40 < s \leq 50$	

(2)

- (b) What fraction of the students scored more than 30?
Give your answer in its simplest form.

.....
(2)

(Total for Question 3 is 4 marks)

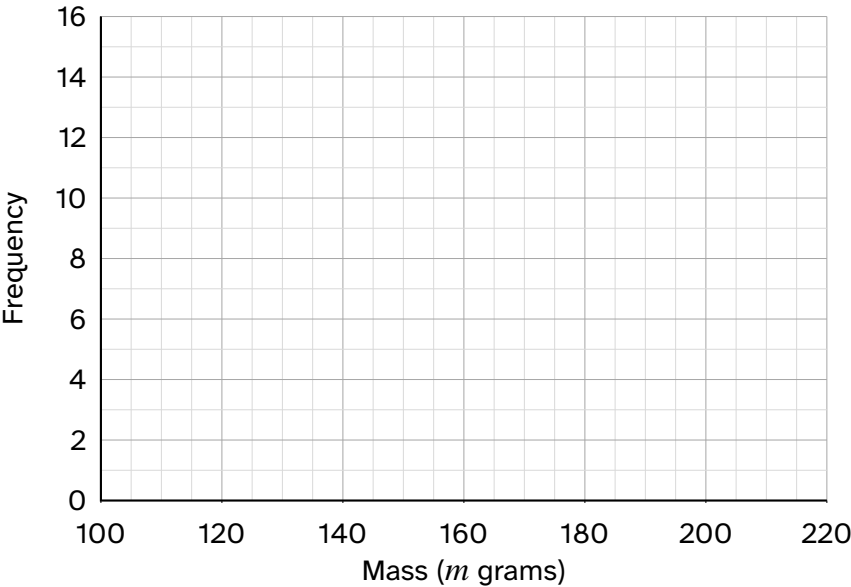
4 The table gives information about the masses, m grams, of 50 apples.

Mass (m grams)	Frequency
$100 < m \leq 120$	4
$120 < m \leq 140$	10
$140 < m \leq 160$	15
$160 < m \leq 180$	12
$180 < m \leq 200$	6
$200 < m \leq 220$	3

(a) Find the class interval that contains the median.

.....
(1)

(b) On the grid, draw a frequency polygon for the information in the table.

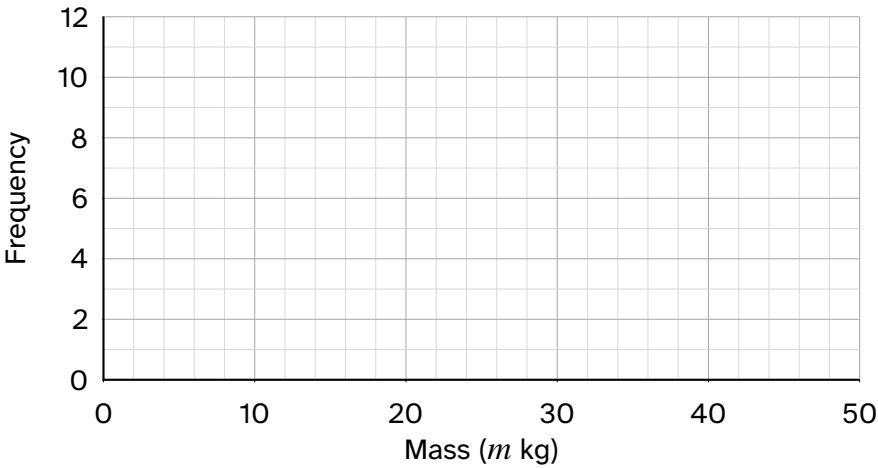


(2)
(Total for Question 4 is 3 marks)

5 The table gives information about the masses, m kg, of 34 parcels.

Mass (m kg)	Frequency
$0 < m \leq 10$	3
$10 < m \leq 20$	7
$20 < m \leq 30$	11
$30 < m \leq 40$	8
$40 < m \leq 50$	5

(a) Draw a frequency polygon for this information.



(2)

(b) Sam says, “The heaviest parcel was 45 kg, because the last point of the frequency polygon is at 45”

Explain why Sam could be wrong.

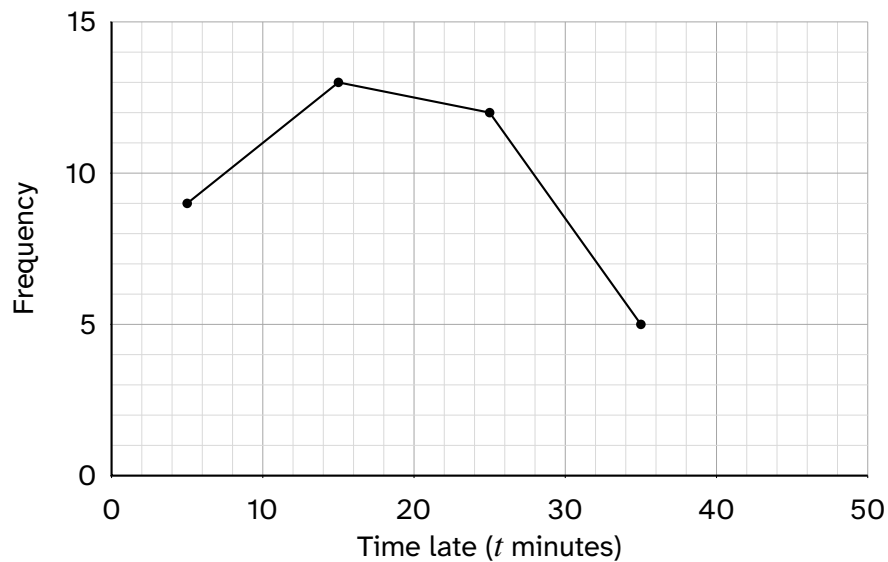
(1)

(Total for Question 5 is 3 marks)

- 6 The table gives information about how late, in minutes, 40 buses arrived at a bus station.

Time late (t minutes)	Frequency
$0 < t \leq 10$	9
$10 < t \leq 20$	13
$20 < t \leq 30$	10
$30 < t \leq 40$	5
$40 < t \leq 50$	3

Kofi draws a frequency polygon for the information in the table.

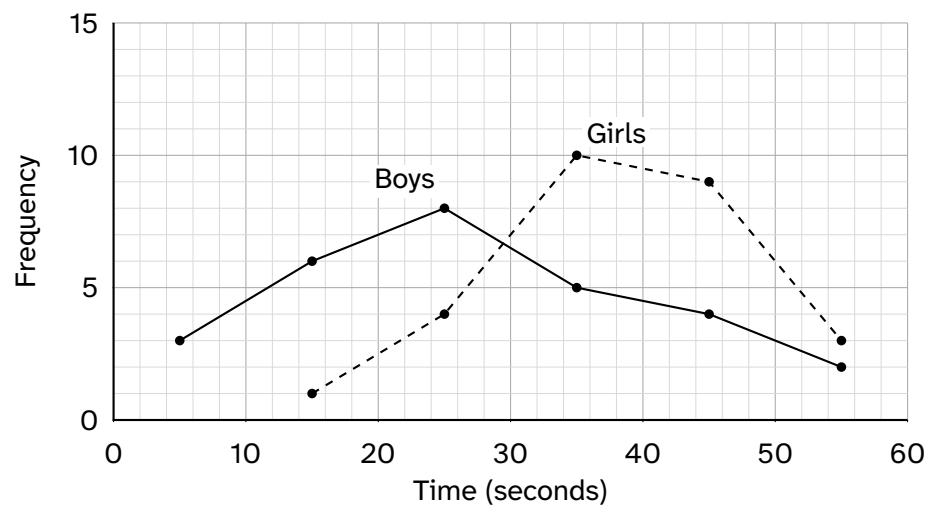


Write down **two** mistakes that Kofi has made.

(2)

(Total for Question 6 is 2 marks)

- 7 The two frequency polygons show information about the times taken by some boys and some girls to solve a puzzle.



Compare the distributions of the times for the boys and the girls.

(2)

(Total for Question 7 is 2 marks)
