7. A class of 30 students counted the number of books in their bags on a certain day. The number of books in EACH bag is shown below.

5	4	6	3	2	1	7	4	5	3
6	5	4	3	7	6	2	5	4	5
5	7	5	4	3	2	1	6	3	4

(a) Copy and complete the frequency table for the data shown above.

Number of Books (x)	Tally	Frequency (f)	f × x
1				2	2
2					3	6
3			
4			
5			
6			
7			

(4 marks)

(b) State the modal number of books in the bags of the sample of students. **(1 mark)**

(c) Using the table in (a) above, or otherwise, calculate

   (i) the TOTAL number of books **(2 marks)**

   (ii) the mean number of books per bag. **(2 marks)**

A class of 24 students threw the cricket ball at sports. The distance thrown by each student was measured to the nearest metre. The results are shown below.

22	50	35	52	47	30
48	34	45	23	43	40
55	29	46	56	43	59
36	63	54	32	49	60

(a) Copy and complete the frequency table for the data shown above.

Distance (m)	Frequency
20 – 29	3
30 – 39	5
_____	_____
_____	_____
_____	_____

(3 marks)

(b) State the lower boundary for the class interval 20 – 29. **(1 mark)**

(c) Using a scale of **1 cm on the x-axis to represent 5 metres**, and a scale of **1 cm on the y-axis to represent 1 student**, draw a histogram to illustrate the data.

(5 marks)

(d) Determine

   (i) the number of students who threw the ball a distance recorded as 50 metres or more **(1 mark)**

The heights of a sample of seedlings were measured to the nearest centimetre and then arranged in class intervals as shown in the table below.

Height in cm	Midpoint	Frequency
3–7	5	0
8–12	10	3
13–17	15	12
18–22		16
23–27		22
28–32		18
33–37		14

(a) How many seedlings were in the sample? **(1 mark)**

(b) For the class interval written as "8–12" in the table above, write down

    (i) the lower class limit **(1 mark)**

    (ii) the upper class **boundary** **(1 mark)**

    (iii) the class **width**. **(1 mark)**

(c) Copy and complete the table by inserting

    (i) the midpoints of EACH class interval **(2 marks)**

    (ii) the missing values for the class interval after the interval "33–37". **(1 mark)**

7. The data below are the lengths, to the nearest centimetre, of the right foot of the 25 students in a class.

```
14    18    20    22    24
15    18    20    22    25
16    18    21    22    25
16    19    22    23    26
17    19    22    23    27
```

(a) Copy and complete the following grouped frequency table for the data above.

Length of Right Foot (cm)	Frequency
14 - 16	4
17 - 19	___
20 - 22	8
_____	5
26 - 28	2

(2 marks)

(b) State the lower boundary of the class interval 14 - 16.

(1 mark)

(c) State the width of the class interval 20 -22.

(1 mark)

(d) A student's right foot measured 16.8 cm. State the class interval in which this length would lie.