

1. Jake and Sarah each played a computer game six times.

Their scores for each game are shown below.

Jake	10	9	8	11	12	8	$12 - 8 = 4$
Sarah	2	10	7	14	4	10	$14 - 2 = 12$

- (a) Who had the most consistent scores, Jake or Sarah?
You must give a reason for your answer.

Jake, because he had the smallest range

Jake played a different game 20 times.

The stem and leaf diagram shows information about his scores.

0	9
1	2 3 3 4 5
2	5 6 6 6 6 7
3	1 3 4 6 8
4	0 2 9

Key

1 | 2 represents 12 points

Jake said his modal score was 6 points because 6 occurs most often in the diagram.

- (b) Is Jake correct?
You must explain your answer.

No, because Jake has not used the stem of the diagram, so modal score is actually 26

(1)

(Total for Question is 2 marks)

2. Here are the marks 20 students got in a French test.

~~76~~ ~~82~~ ~~84~~ 69 80 64 70 81 75 91
87 67 80 70 94 76 81 69 71 77

(a) Show this information in a stem and leaf diagram.

Unordered diagram:
stem → TENS leaf → UNITS

6	9479	
7	6050617	
8	2401701	①
9	14	

$6 | 4 = 64$ ①

6	4799	
7	0015667	①
8	0011247	
9	14	

6	4799	
7	0015667	
8	0011247	
9	14	

(3)

One of these students is going to be chosen at random.

The pass mark in the French test is 71

Omar writes,

The probability that this student failed the French test is $\frac{1}{4}$

Omar is wrong.

(b) Explain why.

6 Students failed ① (had a score less than 71)
 $\frac{6}{20} \neq \frac{1}{4}$ ①

(2)

(Total for Question is 5 marks)

3. The stem and leaf diagram below gives information about the ages of people in a social club.

3	1	4	5			
4	0	2	2	5	6	
5	0	1	7	7	8	9
6	3	4	5	9		
7	0	4				

Key: 4|2 represents 42 years

Find the range of these ages.

31

74 ✓

$$74 - 31 = 43$$

..... 43 ✓ years

(Total for Question is 2 marks)

DO NOT WRITE IN THIS AREA

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4. The table shows information about the heights, in cm, of a group of Year 9 girls.

least height	150 cm
median	165 cm
greatest height	170 cm

Range = $170\text{cm} - 150\text{cm}$
 = 20cm ✓

This stem and leaf diagram shows information about the heights, in cm, of a group of 15 Year 9 boys.

15	8 9 9
16	4 5 7 7 8
17	0 3 4 4 7
18	0 2

Median position = $\frac{15+1}{2} = 8$ range = $182\text{cm} - 158\text{cm}$
 = 24cm

Median = 168cm

Key: 15 | 8 represents 158 cm

→ Median and range

Compare the distribution of the heights of the girls with the distribution of the heights of the boys.

Median height for girls is less than median height for boys
 ($165 < 168$) ✓

Range for girls is less than the range for boys ($20 < 24$) ✓

(Total for Question is 3 marks)