Stem and Leaf Diagrams

1. The stem and leaf diagram below shows the price of bottle of milk in 13 different shops.

Price of milk in different shops

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

Key: 6|2   means 62p

a) How much was the most expensive bottle of milk?

b) How much was the cheapest bottle of milk?

c) What was the range of the prices of the bottles of milk?

d) What was the modal price of a bottle of milk in the 13 shops?

e) What was the median price of a bottle of milk in the 13 shops?

2. The stem and leaf diagram below shows the age of 19 members of a bowls club.

Age of members of a bowls club

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

Key: 3|2   means 32 years old

a) How old was the oldest member of the bowls club?

b) How old was the youngest member of the bowls club?

c) What was the range of the ages of the members of the bowls club?

d) What was the modal age of the members of the bowls club?

e) What was the median age of the members of the bowls club?

3. The stem and leaf diagram below shows the mass of 16 pumpkins in a pumkin growing competition.

a) What was the modal mass of the pumkins?

b) What was the median mass of the pumpkins?

c) What was the range of the masses of the pumpkins?

Mass of pumpkins in a competition

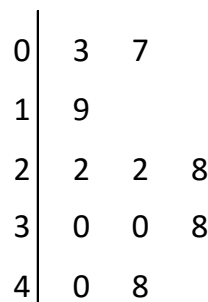| 2	0	3	7		
3	3	3	5	6	
4	5	7	8	9	
5	0	1	2	4	7

Key: 2|7   means 27kg

4. The stem and leaf diagrams below show the number of Vivos received by Year 7 and Year 9 on Monday 2nd December 2013.

Number of Vivos received
by Year 7 on Monday

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

Key: 1|5   means 15 Vivos
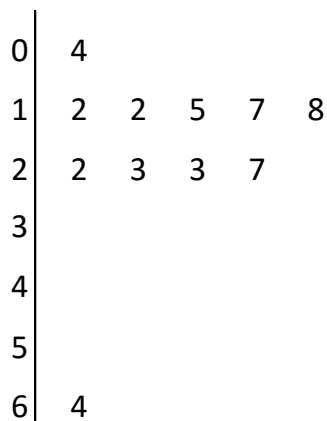
Number of Vivos received
by Year 9 on Monday

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

Key: 1|9   means 19 Vivos

a) What was the maximum number of Vivos received by a Year 7 tutor group?
b) What was the minimum number of Vivos received by a Year 9 tutor group?
c) True or false: "*The lowest number of Vivos on Monday was in a Year 7 tutor group*"? Explain your answer.
d) Calculate the median number of Vivos received by: i) Year 7   ii) Year 9.
e) Calculate the range of the number of Vivos received by: i) Year 7   ii) Year 9
f) With reference to your answers to d) and e), decide which year group did better on Monday. Justify your answer.

5. The stem and leaf diagrams below show the test marks achieved by Mr Burke and Miss Morton's Year 9 classes.
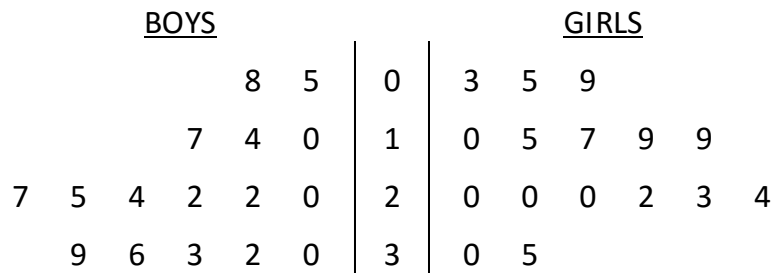
Mr Burke's Year 9 Test Results

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

Key   2|3   means 23 marks
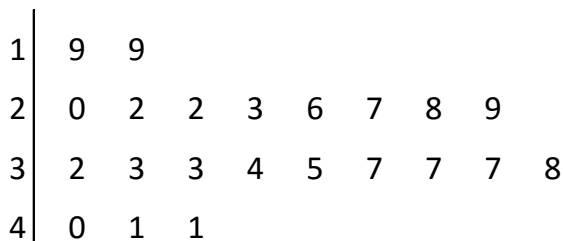
Miss Morton's Year 9 Test Results

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

Key   2|5   means 25 marks

a) Calculate the median mark for: i) Mr Burke   ii) Miss Morton's class
b) Calculate the range of the marks for: i) Mr Burke   ii) Miss Morton's class

c) With reference to your answers to parts a) and b), compare the performance of Mr Burke and Miss Morton's Year 9 classes.

6. The back-to-back stem and leaf diagram below shows the amount of money spent by male and female Year 7 students on Christmas presents.

Back-to-back Stem and Leaf diagram comparing the
amount of money spent by Year 7 boys and girls on
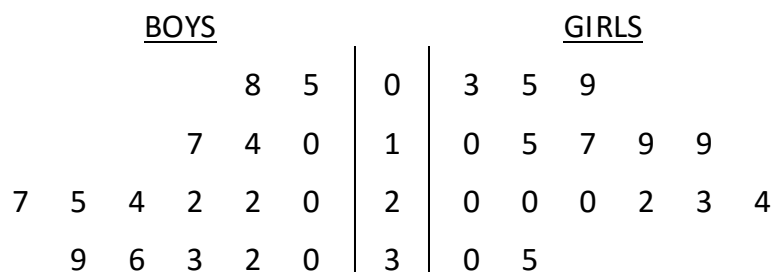Christmas presents

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

Key:	4	1	5 means £14 for the boys and £15 for the girls

a) Calculate the modal amount spent by   i) the boys   ii) the girls
b) Calculate the median amount spent by   i) the boys   ii) the girls
c) Calculate the range of money spent by   i) the boys   ii) the girls
d) Compare the amount of money spent by the boys and girls in Year 7 on Christmas presents.

6. The back-to-back stem and leaf diagram below shows the amount of money spent by male and female Year 7 students on Christmas presents.

Back-to-back Stem and Leaf diagram comparing the
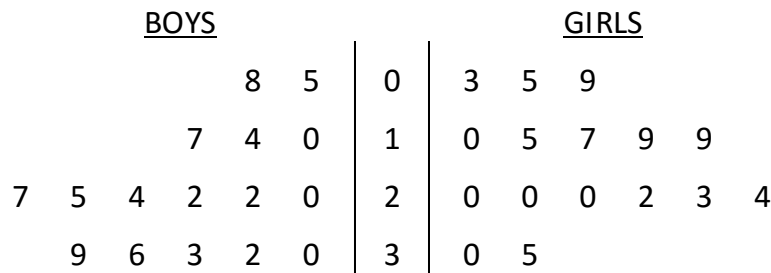amount of money spent by Year 7 boys and girls on
Christmas presents

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

Key:	4	1	5 means £14 for the boys and £15 for the girls

a) Calculate the modal amount spent by   i) the boys   ii) the girls
b) Calculate the median amount spent by   i) the boys   ii) the girls

c) Calculate the range of money spent by   i) the boys   ii) the girls

d) Compare the amount of money spent by the boys and girls in Year 7 on Christmas presents.

6. The back-to-back stem and leaf diagram below shows the amount of money spent by male and female Year 7 students on Christmas presents.

<div align="center">

Back-to-back Stem and Leaf diagram comparing the
amount of money spent by Year 7 boys and girls on
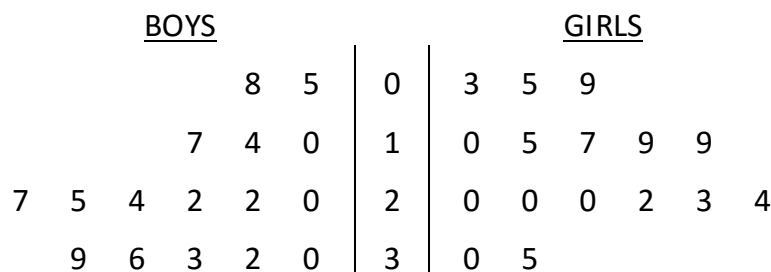Christmas presents

</div>

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

Key:	4	1	5 means £14 for the boys and £15 for the girls

a) Calculate the modal amount spent by   i) the boys   ii) the girls

b) Calculate the median amount spent by   i) the boys   ii) the girls

c) Calculate the range of money spent by   i) the boys   ii) the girls

d) Compare the amount of money spent by the boys and girls in Year 7 on Christmas presents.

الرياضيات – تفكير سليم – دقة وتعاون – صبر ونظام – تذوق الجمال العلمي .

Mathematics- Proper Thinking- Accuracy and Cooperation- Patience and Discipline- Science Beauty sensation

b) Calculate the median amount spent by   i) the boys   ii) the girls

c) Calculate the range of money spent by   i) the boys   ii) the girls

d) Compare the amount of money spent by the boys and girls in Year 7 on Christmas presents.

الرياضيات – تفكير سليم – دقة وتعاون – صبر ونظام – تذوق الجمال العلمي .

Mathematics- Proper Thinking- Accuracy and Cooperation- Patience and Discipline- Science Beauty sensation