MEASURES OF CENTRAL TENDENCY - MEASURES OF SPREAD

1 Find the mean of the following data sets. Where necessary, state your answers correct to 2 decimal places.

(a) The following data represents the number of cars that passed the school gate in a number of 5-minute periods.
7, 14, 12, 11, 13, 16, 17, 9, 7, 12, 13, 15

(b) The following data represents the number of brothers and sisters for the students in two Year 11 classes.

Number of brothers and sisters (x)	Frequency (f)
0	6
1	11
2	18
3	9
4	3

2 Find the median of the following data sets.

(a) 1, 4, 3, 2, 6, 4, 8, 9, 4, 3, 1

(c)

Score (x)	Frequency (f)
0	3
1	6
2	7
3	4
4	3
5	1

3 Find the median class interval for the following data set

(a)

Time (x)	Frequency (f)
12–<12.5	3
12.5–<13	5
13–<13.5	4
13.5–<14	11
14–<14.5	6

4 Find the mode of the following data sets.

(a) 4, 6, 4, 2, 7, 8, 3, 4, 9, 1, 1 **(b)** 3, 5, 2, 1, 7, 4, 9, 3, 5, 6, 8

6 Find the interquartile range for the following data sets.

(a) 2, 3, 5, 8, 9, 11, 15, 16, 18, 25, 36

(b) 4, 5, 2, 6, 7, 9, 1, 9, 11, 12, 16, 18, 21, 17, 16, 17

7 Complete the five-number summary and use it to draw the box plot for each of the following data sets.

(a) 2, 3, 5, 5, 5, 6, 8, 9, 10, 11, 12, 15

(b) 2, 5, 9, 11, 12, 9, 8, 7, 12, 14, 13, 22, 15, 18

8 Find the five-number summary, IQR and range for each of the following data sets. Then create a box plot.

(a)

Score	Frequency (f)
0	3
1	6
2	7
3	4
4	3
5	1

(c)

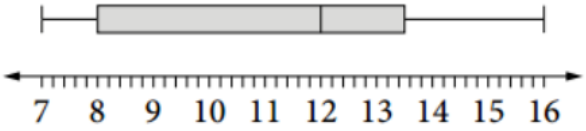
Stem	Leaf
1	1 2 3 3 4 4 5 8
2	2 3 4 5
3	0 1 6 6 2 1
4	2 2 3 9
5	0 9
6	1 8

Key: 5|9 = 59

9 Determine if any of the values in the following data sets would be regarded as outliers.

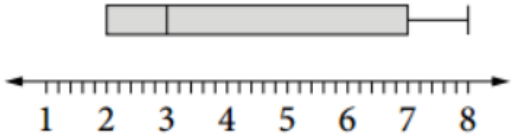
(a) 1, 2, 17, 18, 19, 22, 24, 26, 27, 28 **(b)** 5, 9, 11, 13, 17, 18, 19, 19, 29

13 Look at the following box plot.



The IQR is closest to: **A** 9 **B** 1 **C** 5.5 **D** 1.5

14 Look at the following box plot. Find the range.



17 For each of the following data sets, calculate:

(i) the value below which outliers would occur
(ii) the value above which outliers would occur.

(a) 13, 15, 22, 27, 36, 41, 28, 17, 25, 36, 15

(c)

x	5	6	7	8
f	3	4	2	1