PART A

1. Determine the Mean, Median, Mode, and Range for each of the data sets.

a)   73, 49, 80, 54, 30, 81, 43, 78, 56, 34, 53, 17

b)   14, 38, 80, 90, 98, 18, 96, 87, 55

c)   58, 57, 18, 13, 54, 54, 56, 90

d)   96, 13, 58, 78, 78, 32, 95, 23, 25, 22

2.   Determine the quartiles (Q_1, Q_2, Q_3) and the Interquartile Range for each data set.

a)   22, 16, 4, 21, 3, 23, 8, 12, 11

b)   1, 23, 11, 4, 21, 18, 16, 10, 2, 14, 25, 19, 8

c)   17, 20, 3, 10, 21, 9, 2, 24, 1, 8, 23, 25

3.   For each of the box plots below, state the minimum, maximum, median, lower quartile and upper quartile.

a)

b)
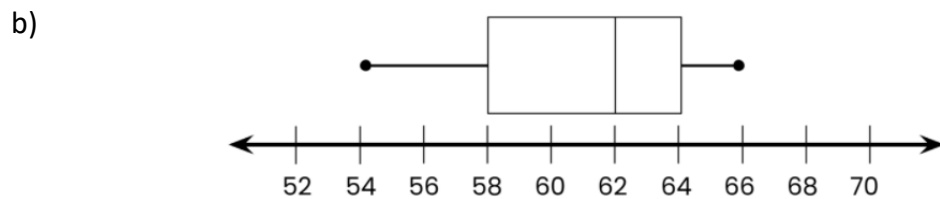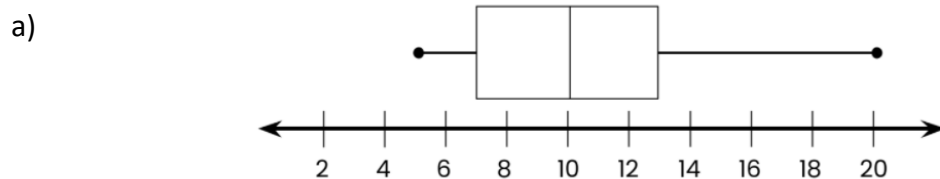
4.   A grocery store logged how many pounds of oranges it sold over 10 days. Using the data below, determine the minimum, maximum, and quartiles and create a box plot of the information.

39, 29, 46, 45, 27, 37, 48, 50, 47, 28

5.   One baseball team logged the number of games they won over course of 13 seasons. Using the data below, determine the minimum, maximum, and quartiles and create a box plot of the information.

39, 31, 43, 50, 41, 28, 38, 32, 44, 27, 46, 30, 40

6. First National Bank recorded the number of transactions over 12 randomly selected days. Using the data below, determine the minimum, maximum, and quartiles and create a box plot of the information.

86, 77, 92, 81, 88, 93, 80, 95, 76, 89, 75, 94

7. Sarah recorded the number of tickets that were sold over 11 days at her art show. Using the data below, determine the minimum, maximum, and quartiles and create a box plot of the information.

77, 90, 82, 94, 84, 91, 99, 80, 100, 89, 75

PART B

8. The mean cost of university tuition for five students was $8000 per year. If the first four students paid $7500, $8100, $8300, and $8250, how much was the tuition for the fifth student?

9. In a class of 20 students the median mark on the last test was 74% and the range was 32 percent. Create a list of marks that could be possible for this class.

10. Determine a data set that satisfies the given information:

a) three numbers with a mean of 8, median of 10, and a range of 8.

b) four numbers with a mean of 7.5, median of 7, and mode of 6.

c) five numbers with a mean of 4, mode of 2, and range of 6.

11. Two students collected information about the wing spans of bats.
Student A collected 6 sample measurements with a mean of 13 cm.
Student B collected 4 measurements.
The overall mean of the combined measurements of both students was 13.4 cm.
Determine the missing data value for each student.

Student	Data set (wingspans in cm)						Mean (cm)
A	13	-	16	12	10	15	13
B	13	16	-	13			

ANSWERS
1) a) mean=54, median=53.5, mode=none, range=64 b) mean=64, median=80, mode=none, range=84 c) mean=50, median=55, mode=54, range=77 d) mean=52, median=45, mode=78, range=83
2) a) Q_1=6, Q_2=12, Q_3=21.5, IQ range=15.5   b) Q_1=6, Q_2=14, Q_3=20, IQ range=14
c) Q_1=5.5, Q_2=13.5, Q_3=22, IQ range=16.5
3) a) min=5, max=20, Q_1=7, Q_2=10, Q_3=13   b) min=54, max=66, Q_1=58, Q_2=62, Q_3=64
4) min=27, max=50, Q_1=29, Q_2=42, Q_3=47   5) min=27, max=50, Q_1=30.5, Q_2=39, Q_3=43.5
6) min=75, max=95, Q_1=78.5, Q_2=87, Q_3=92.5 7) min=75, max=100, Q_1=80, Q_2=89, Q_3=94
8) $7850   9) answer will vary, min=58 middle 2 marks must average 74, max=90
10) a) 3, 10, 11   b) 6, 6, 7, 10   c) 2, 2, 2, 6, 8 or 2, 2, 3, 5, 8   11) A: 12 cm B: 14 cm