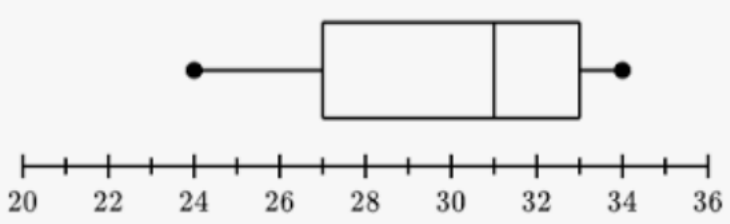
Q1

Find the range and the interquartile range of the dataset represented in the following box and whisker plot. What type of skewness would you expect this set of data to have?



Q2

The following figures are the amount spent on food by a family for 11 weeks

$ 16 $12 $9 $11 $7 $19 $15 $12 $10 $20 $13

(a) Find standard deviation
(b) Justify whether this set of data has any outlier or not?

Q3

The back-to-back stem-and-leaf diagram shows the diameters, in cm, of 19 cylindrical pipes produced by each of two companies, *A* and *B*.

Company *A*							Company *B*				
					4	33	1	2	8		
	9	8	3	2	0	34	1	6	8	9	9
8	7	5	4	1	1	35	1	2	2	3	
		9	6	5	2	36	5	6			
			4	3	1	37	0	3	4		
						38	2	8			

Key: 1 | 35 | 3 means the pipe diameter from company *A* is 0.351 cm and from company *B* is 0.353 cm.

(i) Find the interquartile rang of the diameter of the pipes produced by the companies A and B.
(ii) Comment on the nature of distribution for each set of data.

Q4

The summary of a set of 15 data is given as follows: $\sum x^2 = 240$, $\sum x = 45$. Calculate the standard deviation and hence find the value of $\sum(x - \bar{x})^2$.

Q5

The following table summarizes the performance analysis of two teams in a football tournament. Interpret the result.

	Mean Number Goal	Standard deviation
Team A	3.15	1.37
Team B	2.9	0.29