Answer on Question #68119 – Math – Statistics and Probability

QUESTION 1

The cumulative grade-point average (CGPA) for the top 25 undergraduates in one particular university are listed in Table 3,

Table 3

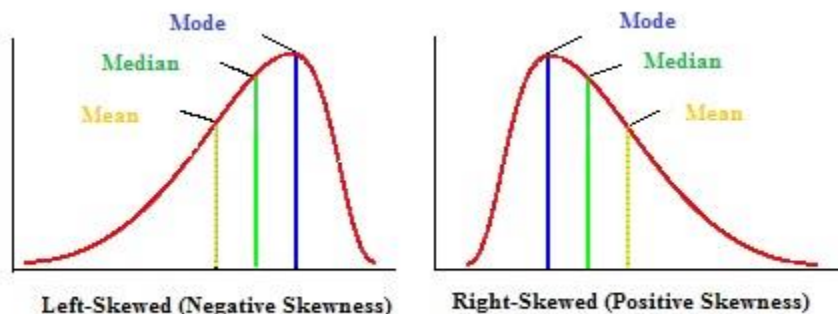|				
3.80	3.77	3.70	3.74	3.70
3.86	3.76	3.68	3.67	3.57
3.83	3.70	3.80	3.74	3.67
3.78	3.74	3.73	3.65	3.66
3.75	3.64	3.78	3.73	3.64

a) Calculate the mean, the median and the mode of the CGPA. (8 Marks)
b) Comment on the shape of the distribution of the CGPA based on the values gathered in (a). (2 Marks)

Solution

First rank data.

a) Mean= $\frac{1}{n}\sum x_i = 3.7236$, Median= $x_{13} = 3.73$, Mode= 3.7, because 3.7 is the most frequent value.

b) Since Mode < Median and Median≈Mean, the distribution of GPA is slightly skewed right.

Left-Skewed (Negative Skewness)   Right-Skewed (Positive Skewness)