Q6.17

The FIFA World Cup was one of the biggest sporting events of 2018. The file [WC2018TeamAge]

contains average age of the players (years, in 2018) of the 32 teams that qualified for the event.

**Souce data: elearning – WC2018TeamAge**

Decide whether the teams’ mean ages appear to be approximately normally distributed by

1. Comparing data characteristics to theoretical properties.
2. Constructing a normal probability plot.

Answer template:

1. Excel output:

[attached figure]

The mean is ……

The range is ……..

The interquartile range is …..

1. Normal probability plot

[attached figure]

The normal probability plot indicates ……..

The kurtosis is …….

The skewness ……….

Q6.19

Thirty companies comprise the DJIA. How big are these companies? One common method for measuring the size of acompany is to use its market capitalization, which is computed by multiplying the number of stock shares by the price of a share of stock. On March 7, 2018, the market capitalization of these companies ranged from Traveler’s $38.4 billion to Apple’s $896.4 billion. The entire population of market capitalization values is stored in DowMarketCap.

**Source data: elearning DowMarketCap**

Decide whether the market capitalization of companies in the DJIA appears to be approximately normally distributed by

1. Comparing data characteristics to theoretical properties
2. Constructing a normal probability plot
3. Constructing a histogram.

Answer template:

1. SPSS output:

[attached descriptive statistics]

[attached boxplot]

1. [attached Q-Q plot]

[attached histogram]

Conclude:

The mean is ……

The range is ……..

The interquartile range is …..

The Q-Q plot indicates ……..

The boxplot …..

The kurtosis is …….

TThe skewness ……….