**Coursera Peer-Graded Assigment 1**

Q:1 the sample mean of 7, 9, 10, and 11

Ans: **x̅** = ∑(xi )/n

xi = 7,9,10,11

**x̅** =( 7+9+10+11)/4

**x̅** = 37/4

**x̅** = 9.25

Q:2 the sample median for the observation 7, 9, 10, and 11

Ans: For even Observations

Median = Avg (n/2, n/2 +1)th

Median = Avg (4/2, 4/2 +1)

Median = Avg (2th , 3th)

Median = Avg(9,10)

Median = (9+10)/2

Median = 19/2

Median = 9.5

Q: 3 Show that

Ans: L H S

We have : and **x̅** = 9.25

* (7-9.25) +(9-9.25) +(10-9.25) +(11-9.25)
* -2.25 – 0.25 +0.75 + 1.75
* -2.5 + 2.5
* 0 hence L H S is equal to R H S Proved

Q: 4 Compute the sample variance of four observations 7, 9, 10, and 11

Ans: Sample variance

Q: 5

Ans: Sample Standard deviation

Q: 6 compute \bar{x} - 2\times s x ˉ −2×s OR **x̅ - 2S.**

Ans: we have, **x̅ = 9.25, S = 1.708**



Q: 7 compute \bar{x} + 2\times s x ˉ + 2×s OR **x̅ + 2S.**

Ans: we have, **x̅ = 9.25, S = 1.708**



Q: 8 state how many of the four observations lie in the interval ("x̅ - 2×S" , "x̅ + 2×S")

Ans: 100% of the Observations are between and, that is, within two

(sample) standard deviations about the (sample) mean.