Assignment #11 Solutions

due Friday, November 15th, 2019

1

1	Problem 1			
2	Data		Bin	Frequency
3	137		136	0
4	139		138	3
5	141		140	2
6	137		142	4
7	144		144	4
8	141		146	0
9	139			
10	137			
11	144			
12	141			
13	143			
14	143			
15	141			

2 The histogram may or may not look similar. It is not a viable method for telling whether different articles were written by different authors.

3

(a)

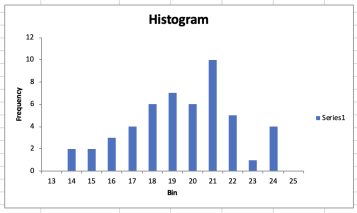
Sample Mean	18.98
Median	19.30
Mode	21.20

(b) Sample Variance = 6.2528

(c) Below is the histogram

c)

Bin	Frequency
13	0
14	2
15	2
16	3
17	4
18	6
19	7
20	6
21	10
22	5
23	1
24	4
25	0



(d) The sample mean and sample variance obtained in part (b) are slightly higher than results obtained in part (a). The results are different because in each bin not every data are located at the midpoint.

d)

Midpoint	Frequency	Midpoint^2			
12.5	0	156.25			
13.5	2	182.25			
14.5	2	210.25			
15.5	3	240.25			
16.5	4	272.25			
17.5	6	306.25			
18.5	7	342.25			
19.5	6	380.25			
20.5	10	420.25			
21.5	5	462.25			
22.5	1	506.25		Sample Mean	18.98
23.5	4	552.25		Sample Varince	6.6629
24.5	0	600.25			

4

1	Data							
2	**Ph.D Field**	**Private Noneducaltional**	**Government**	**University**				
3	**Computer Science**	82000	66000	53000		correlation	a)	0.7941
4	**Engineering**	70000	65000	56300			b)	0.7801
5	**Lide Sciences**	61000	48000	42500				
6	**Math Sciences**	60500	55200	39500				
7	**Social Sciences**	53000	52400	40000				
8	**Physical Sciences**	64000	58000	39400				