

Name _____

AET 4843 Midterm
Spring 2017

You must show your work in a logical flow to receive full and partial credit. Partial credit cannot be given if work is not clearly shown.

1. Using the numbers from Data Table 1, determine the mean, median, and mode:

Mean _____, Median _____, Mode _____

#	Value	
1	44	
2	46	
3	49	
4	55	
5	47	
6	49	
7	52	
8	51	
9	50	
10	47	
11	39	
12	55	
13	61	
14	48	
15	55	

2. Draw a histogram using the numbers from Table 1. Use 3 cells and label the cell midpoints with the value. (Use the axes below.)



3. A sampling of the number of times per week that Slaven trips up the stairs is taken over the year. The following frequencies are observed per week (number of occasions per week: frequency of observations): 0:12, 1:18, 2:29, 3: 38, 4:45, 5:30. Find the mean.

7. Use Data Table 2 to create an X-bar and R chart. Determine the UCL and LCL of each of these charts. Indicate any that are out of control (assume assignable cause) and determine a revised UCL and LCL. Show your work, but place your final answers in the table below. $n = 8$.

X-double bar	
R-bar	
$UCL_{\bar{x}}$	
$LCL_{\bar{x}}$	
UCL_R	
LCL_R	

Table 2		
#	x-bar	R
1	68.5	1.4
2	67.6	1.3
3	69.1	1.8
4	68.0	1.7
5	67.5	0.9
6	68.9	1.1
7	73.9	1.3
8	68.7	0.7
9	67.9	1.5
10	68.1	0.8
11	68.1	0.5