Math 1680

Review for Test 1

1. Draw histogram for the following distribution:

Age	% of Population	Age	% of Population
0-5	8	35-45	13
5-14	18	45-55	10
14-18	6	55-65	8
18-25	7	65-75	10
25-30	5	75-85	5
30-35	10		

2. Find the mean, median and root mean square (RMS) for the following list:
   1, 5, -7, 8, -10, 9, -6, 5, 12, -17
3. (i) Find the mean and SD for the list: 41, 48, 50, 55, 54, 57, 61
   (ii) Which numbers in this list are within 1.2 SD of average?
4. Heights of men in a certain survey averaged 72.5 inches and the SD was 2.9 inches. Use the normal curve to estimate the percentage of men between 71 inches and 74 inches.
5. The same height distribution mentioned in #4 follow normal curve. One person called Mr. XYZ was 0.65 DSs above average. About what percentage of the people in that survey had lower height than he did?
6. Find the Area under the normal curve:
   i) Outside –1.3 and 1.8
   ii) Left of 1.1
   iii) Between –0.4 and 1.4
7. The following list of Test scores has an average of 50 and SD of 10.
   39, 41, 47, 58, 65, 37, 37, 49, 56, 59, 62, 36, 48,
   52, 64, 29, 44, 47, 49, 52, 53, 54, 72, 50, 50
   A student who scored 53 on the test was at the .....th percentile of the score distribution.
8. Draw a scatter diagram and find the value of correlation coefficient (r) for the following distribution. What do you conclude?

x	1	3	4	2	1
y	2	1	0	3	2

9. Plot the SD line based on following information:
   Mean of x = 5.3, SD of x = 2.78
   Mean of y = 4.3, SD of y = 2.38 and r = 0.89
   Also, find the slope of SD line.
10. Compute the correlation coefficient for the following and write down your conclusion.

x	1	2	4	5	6
y	2	3	5	6	2