

## HW Normal distributions questions:

1. For the following set of numbers, find the median. 31, 48, 44, 23, 28, 35
2. Find the median for the data items in the given frequency distribution:

<b>Score, x</b>	1	2	3	4	5	6	7	8
<b>Frequency, f</b>	3	5	6	5	6	2	2	1

3. Find the mean, mode and range for the following group of data items. 22, 19, 18, 17, 23, 20, 16, 18.
4. Find the standard deviation for the group of data items. 10, 11, 12, 13, 14.
5. Not everyone pays the same price for the same model of a car. The mean is \$ 20 000 and the standard deviation is \$2000. Use the 68-95-99.7 Rule to find the percentage of buyers who paid less than \$14,000.
6. Scores on the GRE (Graduate Record Examination) are normally distributed with a mean of 503 and a standard deviation of 141. Use the 68-95-99.7 Rule to find the percentage of people taking the test who score between 80 and 926.
7. Intelligence quotas on two different tests are normally distributed. Test A has a mean of 100 and a standard deviation of 16. Test B has a mean of 100 and a standard deviation of 12. Use z-scores to determine which person has the higher IQ: an individual who scores 132 on Test A or an individual who scores 127 on Test B.
8. Use the standard normal table to find the percentage of data items in a normal distribution that lie **a.** below and **b.** above a z-score of  $-2.3$ .
9. Use the standard normal table to find the percentage of data items in a normal distribution that lie between  $z=0.7$  and  $z=2.8$ .
10. The results of a certain medical test are normally distributed with a mean of 130 and a standard deviation of 13. Use the table to find the percentage of people with readings between 124 and 136.