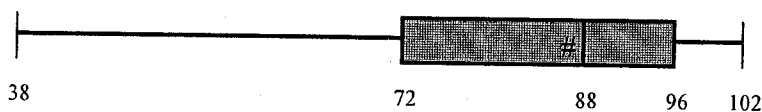


## Alg 2--Stats Worksheet

### Test Scores (as %) for 6<sup>th</sup> Period



- \_\_\_\_\_ 1. What was the high score on the test?
- \_\_\_\_\_ 2. What percent of the class scored above a 72?
- \_\_\_\_\_ 3. What was the median score on the test?
- \_\_\_\_\_ 4. What percent of the class scored between 88 & 96?
- \_\_\_\_\_ 5. If your score is where the # symbol is located, how well did you do compared to the other students?

For the following questions, refer to the following data that shows the total number of points scored in each of the rose bowls from 1970 until 2006.

Year	Total Points	Year	Total Points	Year	Total Points	Year	Total Points
1970	13	1980	33	1990	27	2000	26
1971	44	1981	29	1991	60	2001	58
1972	25	1982	28	1992	48	2002	51
1973	59	1983	38	1993	69	2003	48
1974	63	1984	54	1994	37	2004	42
1975	35	1985	37	1995	58	2005	75
1976	33	1986	73	1996	73	2006	79
1977	20	1987	37	1997	37	2007	50
1978	47	1988	37	1998	37		
1979	27	1989	36	1999	69		

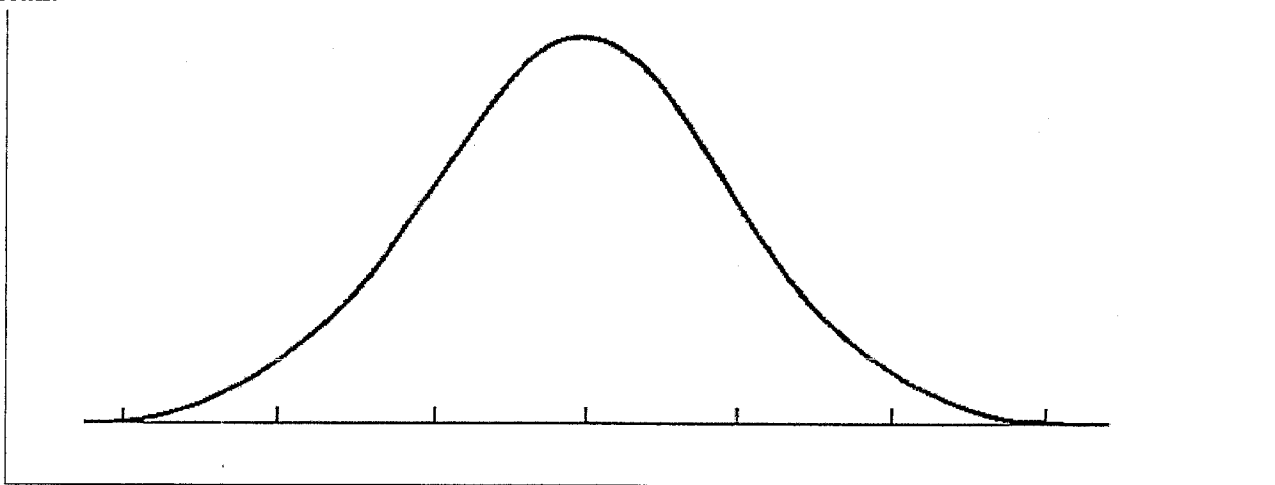
6. What is the standard deviation of the total points scored during the 70s decade?
7. What is the standard deviation of the total points scored during the 80s decade?
8. Which decade (70s or 80s) had a lower standard deviation? What does this mean??

M414 – Chapter 3  
Worksheet 3 - Empirical Rule and Normal Distribution

Name \_\_\_\_\_  
Date \_\_\_\_\_ Period \_\_\_\_\_

In a normal distribution, what percent of the values lie:

1. below the mean? \_\_\_\_\_
2. above the mean? \_\_\_\_\_
3. within one standard deviation of the mean? \_\_\_\_\_
4. within two standard deviations of the mean? \_\_\_\_\_
5. within three standard deviations of the mean? \_\_\_\_\_
6. 2000 freshmen at State University took a biology test. The scores were distributed normally with a mean of 70 and a standard deviation of 5. Label the mean and three standard deviations from the mean.

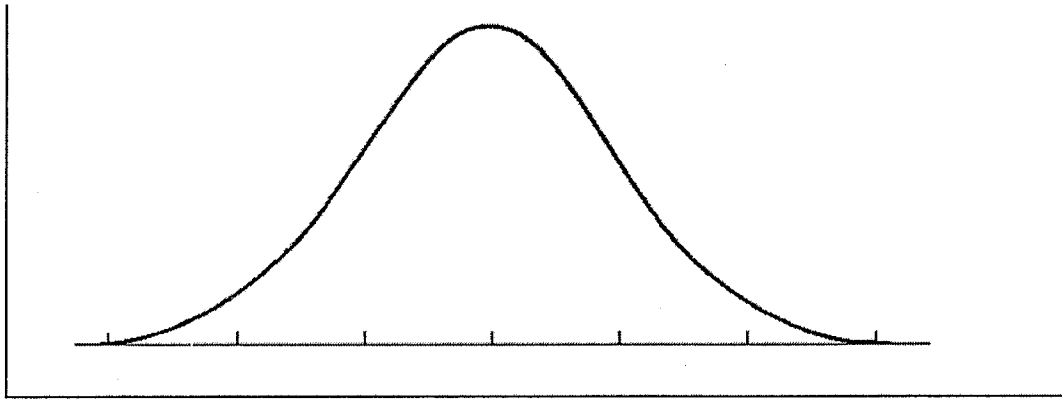


Answer the following questions based on the data:

- a) What percentage of scores are between scores 65 and 75?
- b) What percentage of scores are between scores 60 and 70?
- c) What percentage of scores are between scores 60 and 85?
- d) What percentage of scores is less than a score of 55?
- e) What percentage of scores is greater than a score of 80?
- f) Approximately how many biology students scored between 60 and 70?
- g) Approximately how many biology students scored between 55 and 60?

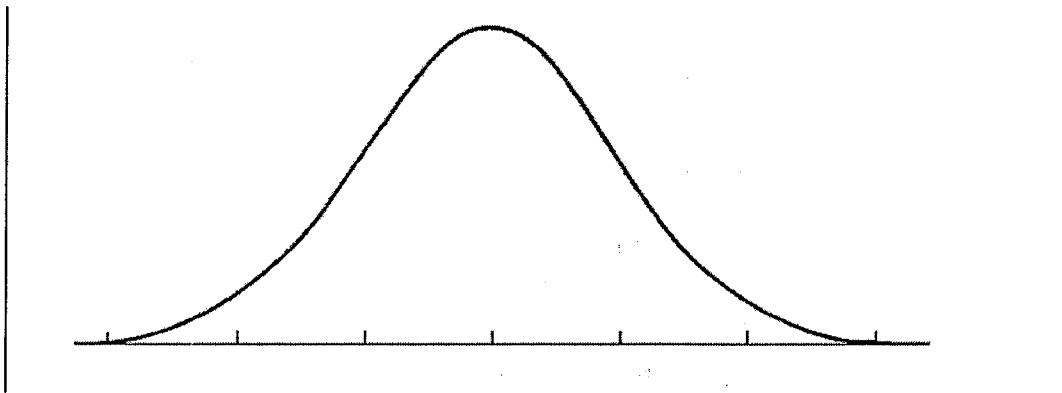
1. The number of hours that the students listened to music during the week was normally distributed. The mean number of hours was 18, with a standard deviation of 2 hours. 17 students were surveyed.

- a. What % of students listened to music 16 or more hours?
- b. How many students listened to music less than 22hours?
  
- c. How many students listened to music between 12 and 22 hours?

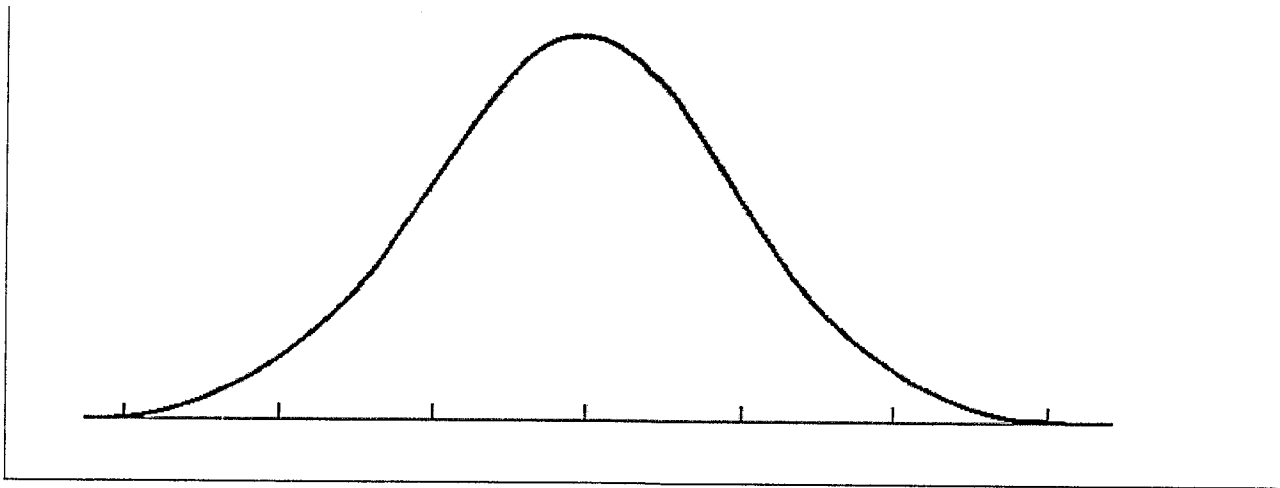


2. The number of chocolates eaten by Ms. Martin each week was normally distributed. The mean number of chocolates she ate per week was 14, with a standard deviation of 3. Her chocolate consumption was charted over 6 weeks.

- a. What % ofthe weeks charted showed she ate 20 or more chocolates?
  
- b. What % of the weeks charted showed she ate between 17and 23 chocolates?
  
- c. For howmany weeks was her chocolate consumption 8 or more chocolates?



8. 500 freshmen at Schaumburg High School took an algebra test. The scores were distributed normally with a mean of 75 and a standard deviation of 7. Label the mean and three standard deviations from the mean.



Answer the following questions based on the data:

- What percentage of scores are between scores 61 and 82?
- What percentage of scores are between scores 75 and 82?
- What percentage of scores are between scores 61 and 89?
- What percentage of scores is less than a score of 61?
- What percentage of scores is greater than a score of 96?
- Approximately how many algebra students scored between 61 and 89?
- Approximately how many algebra students scored between 68 and 82?
- Approximately how many algebra students scored between 61 and 75?
- Approximately how many algebra students scored between 89 and 96?
- Approximately how many algebra students scored higher than 89?