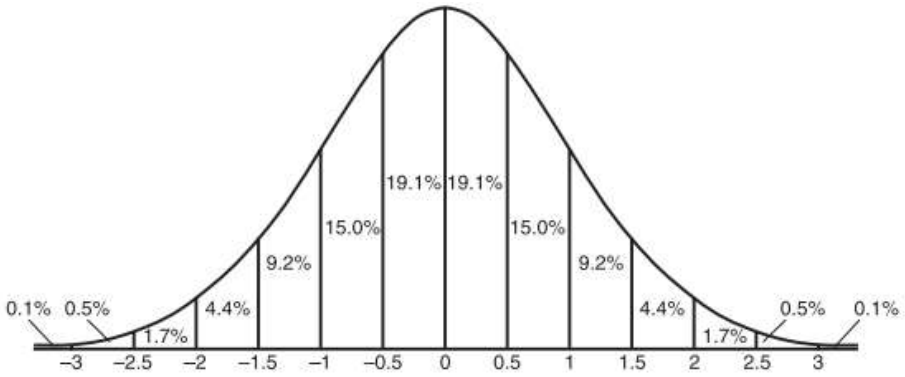
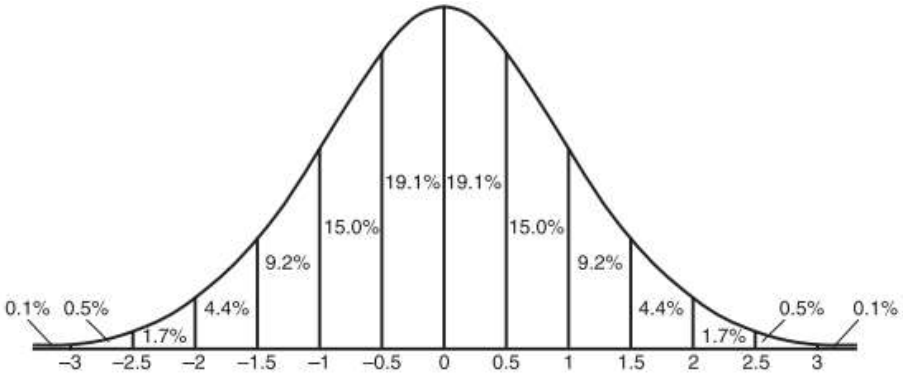
Name _____ Date _____
Mr. Schlansky Algebra II

Normal Distribution Curve

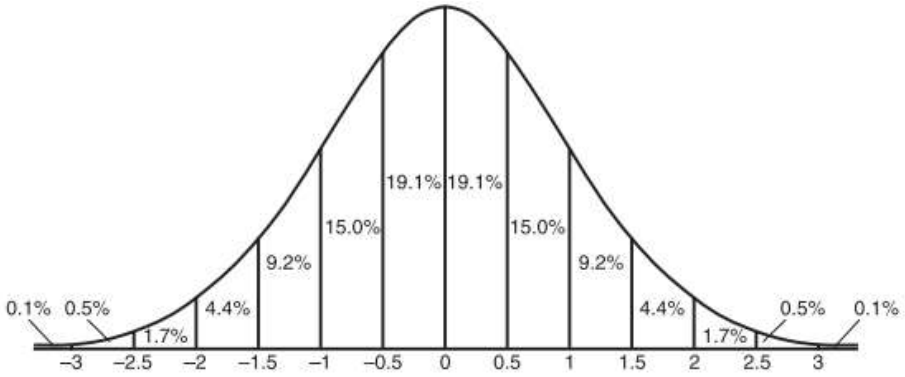
1. On a standardized test, the results are normally distributed, the mean is 78 and the standard deviation is 4. What is the confidence interval? Is a score of 71 plausible? Is a score of 98 plausible? What is the probability that a randomly selected score is between 76 and 82?



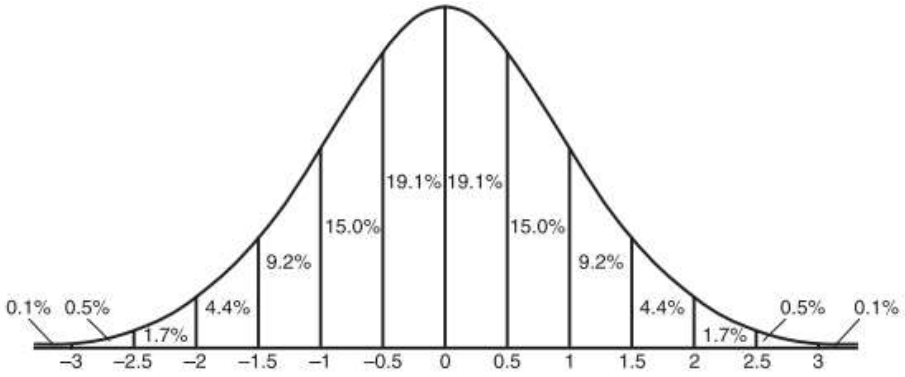
2. On a test that has a normal distribution of scores, 82 is the mean and the standard deviation is 2. What is the confidence interval? Is a score of 97 plausible? Is a score of 81 plausible? What is the probability that a randomly selected score will be between 78 and 84?



3. If the amount of time students work in any given week is normally distributed with a mean of 10 hours per week and a standard deviation of 2 hours, what is the confidence interval? Is a time of 13.5 hours plausible? Is a time of 18.1 hours plausible? What is the probability that a randomly selected student will work between 8 and 12 hours?



4. The lengths of 100 pipes have a normal distribution with a mean of 102.4 inches and a standard deviation of 0.2 inch. What is the range of pipe length that should be expected? Is a pipe length of 101 inches plausible? Is a pipe length of 97 inches plausible? What is the probability that a randomly selected pipe will be between 102 inches and 103 inches?



5. The amount of time students practice their instrument is normally distributed with a mean of 42 minutes and a standard deviation of 7 minutes. What is the confidence interval for the amount of time that students practice their instrument? Is a time of 30 minutes plausible? Is a time of 76 minutes plausible? What is the probability that a randomly selected student practice between 35 and 56 minutes?