TEST 2/WS 1

Name_____

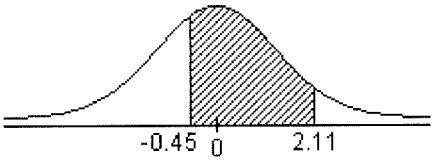
SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Provide an appropriate response.

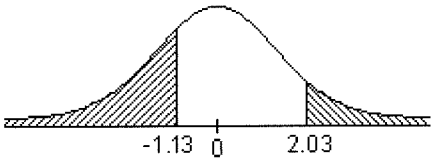
1) Find the area under the standard normal curve between z = 0 and z = 3. 1) _____

2) Find the area under the standard normal curve between z = -1.5 and z = 2.5. 2) _____

3) Find the area of the indicated region under the standard normal curve. 3) _____



4) Find the area of the indicated region under the standard normal curve. 4) _____



5) Use the standard normal distribution to find P(z < -2.33 or z > 2.33). 5) _____

6) For the standard normal curve, find the z-score that corresponds to the first decile. 6) _____

Provide an appropriate response. Use the Standard Normal Table to find the probability.

7) IQ test scores are normally distributed with a mean of 100 and a standard deviation of 15. An individual's IQ score is found to be 120. Find the z-score corresponding to this value. 7) _____

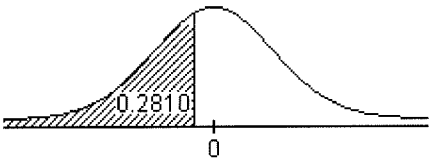
8) The lengths of pregnancies of humans are normally distributed with a mean of 268 days and a standard deviation of 15 days. Find the probability of a pregnancy lasting less than 250 days. 8) _____

9) The lengths of pregnancies of humans are normally distributed with a mean of 268 days and a standard deviation of 15 days. A baby is premature if it is born three weeks early. What percent of babies are born prematurely? 9) _____

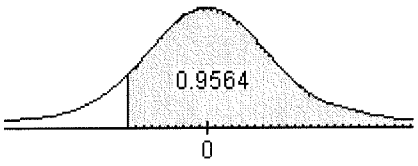
10) The lengths of pregnancies are normally distributed with a mean of 268 days and a standard deviation of 15 days. Out of 50 pregnancies, how many would you expect to last less than 250 days? 10) _____

Provide an appropriate response.

11) Find the z-score that corresponds to the given area under the standard normal curve. 11) _____



12) Find the z-score that corresponds to the given area under the standard normal curve. 12) _____



13) For the standard normal curve, find the z-score that corresponds to the 7^{th} decile. 13) _____

14) Compare the scores: a score of 75 on a test with a mean of 65 and a standard deviation of 8 and a score of 75 on a test with a mean of 70 and a standard deviation of 4. 14) _____

15) Assume that the salaries of elementary school teachers in the United States are normally distributed with a mean of $34,000 and a standard deviation of $2000. What is the cutoff salary for teachers in the bottom 10%? 15) _____

1) 0.4987
2) 0.9270
3) 0.6562
4) 0.1504
5) 0.0198
6) -1.28
7) 1.33
8) 0.1151
9) 8.08%
10) About 6 pregnancies
11) z = -0.58
12) z = -1.71
13) 0.53
14) The two scores are statistically the same.
15) $31,440