STATS10 Introduction to Statistical Reasoning
Practice Final

Problem 1. A student worried that she would be late to an early morning exam, she set TWO alarm clocks. Suppose Alarm Clock 1 is 60% reliable, meaning it will wake her up 6 times out of 10. Suppose Alarm Clock 2 is 90% reliable. What is the chance at least one of the alarms will wake her up?

A) 0.90 B) 0.54 C) 0.96 D) 0.36

Problem 2. A true/false pop quiz contains five questions. What is the probability that when guessing, a student will get at least one question correct? (Round to the nearest hundredth)

A) 0.50 B) 0.97 C) 0.67 D) 1.00

Problem 3. Is the following an example of theoretical probability or empirical probability? A homeowner notes that five out of seven days the newspaper arrives before 5pm. He concludes that the probability that the newspaper will arrive before 5pm tomorrow is about 71%.

A) Theoretical B) Empirical

(Problem 4-7). Use the following table to answer questions 27-30.
A random sample of college students was asked to respond to a survey about how they spend their free time on weekends. One question, summarized in the table below, asked each respondent to choose the one activity that they are most likely to participate in on a Saturday morning. The activity choices were homework, housework, outside employment, recreation, or other.

	Homework	Housework	Outside Employment	Recreation	Other	Total
Male	29	15	20	23	9	96
Female	18	17	26	39	4	104
Total	47	32	46	62	13	200

Problem 4. If one student is randomly chosen from the group, what is the probability that the student is female?

A) 0.52 B) 0.50 C) 0.48 D) None of the above

Problem 5. Given that the randomly chosen student from the group is female, what is the probability that the student chose "outside employment" as their most likely activity on Saturday mornings?

A) 0.13 B) 0.25 C) 0.43 D) None of the above

Problem 6. What is the probability that a randomly chosen survey respondent is male or chose "recreation" as their most likely activity on Saturday mornings?

A) 0.790 B) 0.675 C) 0.480 D) None of the above

Problem 7. Which of the following are mutually exclusive events?

A) Student is male and student chose "homework" as their most likely activity on Saturday mornings.
B) Student is female and student chose "housework" as their most likely activity on Saturday mornings
C) Student chose "recreation" and student chose "other" as their most likely activity on Saturday mornings
D) Student is male and student chose "outside employment" as their most likely activity on Saturday mornings

(Problem 8-10). Use the following information to answer questions 8-10.

You and your friend were studying and you left your cell phone either in the computer lab or in the cafe (these were the only two places you visited). You think that with probability .4 it was left in the computer lab, because you always take it out of your backpack there, otherwise, it was left in the cafe. If you left the phone in the computer lab, the probability that someone stole it is .3. In the cafe, the probability that someone stole it is twice that of the computer lab.

Problem 8. The probability of NOT finding your cell phone (i.e., it was stolen) is

A) 0.60 B) 0.30 C) 0.18 D) 0.90 E) 0.48

Problem 9. The probability of finding your cell phone (i.e., it was stolen) is

A) 0.70 B) 0.40 C) 0.10 D) 0.52 E) 0.82

Problem 10. Given that your cell phone was found, what was the probability that it was found in the computer lab?

A) Approximately 0.28 B) Approximately 0.40 C) Approximately 0.44
D) Approximately 0.54 E) Approximately 0.64

Problem 11. Please determine whether the variable would best be modeled as continuous or discrete: The number of "Yes" votes a ballot proposition received in an election.

(a) Continuous (b) Discrete

Problem 12. Please determine whether the variable would best be modeled as continuous or discrete: The weight of babies born in North Carolina in 2009.

(a) Continuous (b) Discrete

Problem 13. Please determine whether the variable would best be modeled as continuous or discrete: The temperature of a greenhouse at a certain time of the day.

(a) Continuous (b) Discrete

Problem 14. Please determine whether the variable would best be modeled as continuous or discrete: The number of tomatoes harvested each week from a greenhouse tomato plant.

(a) Continuous (b) Discrete

(Problems 15-16) Male players at the high school, college, and professional ranks use a regulation basketball that weighs 22.0 ounces with a standard deviation of 1.0 ounce. Assume that the weights of basketballs are approximately Normally distributed.

Problem 15. Roughly what percentage of regulation basketballs weigh less than 20.7 ounces? Round to the nearest tenth of a percent.

(a) 4.3% of the basketballs will weigh less than 20.7 ounces.

(b) 22.3% of the basketballs will weigh less than 20.7 ounces.

(c) 9.7% of the basketballs will weigh less than 20.7 ounces.

(d) 5.7% of the basketballs will weigh less than 20.7 ounces.

Problem 16. If a regulation basketball is randomly selected, what is the probability that it will weigh between 20.5 and 23.5 ounces? Round to the nearest thousandth.

(a) .866 (b) .134 (c) .267 (d) .704

Problem 17. The Normal model N(58, 21) describes the distribution of weights of chicken eggs in grams. Suppose that the weight of a randomly selected chicken egg has a z-score of 1.78. What is the weight of this egg in grams? Round to the nearest hundredth of a gram.

(a) 95.38 grams (b) 89.50 grams (c) 65.25 grams (d) 79.50 grams

(Problems 18-19) The mean travel time to work for a person working in Kokomo, Indiana, is 17 minutes. Suppose the standard deviation of travel time to work is 4.5 minutes and the distribution of travel time is approximately Normally distributed.

Problem 18. Approximately what percentage of people living and working in Kokomo have a travel time to work that is at least 20 minutes? Round to the nearest whole percent.

(a) 75% (b) 25% (c) 15% (d) None of the above

Problem 19. Suppose that it is reported in the news that 12% of the people living and working in Kokomo feel that their commute is too long. What is the travel time to work that separates the top 12% of people with the longest travel times and the lower 88%? Round to the nearest tenth of a minute.

(a) 26.0 minutes (b) 18.1 minutes (c) 22.3 minutes (d) None of the above

Problem 20. You have been assigned to conduct a survey of college and career intentions of high school students at a local high school. You need to start by drawing a simple random sample of 40 students. Which of the following is most likely to produce a simple random sample?

(a) Select the first 40 students to arrive at school in the morning

(b) Select every 10th student entering the school cafeteria until 40 students are selected

(c) Select 10 each of first-year, second-year, third-year, and fourth-year students

(d) Select the first 40 students to enter the library

(e) Select 40 students at random (by using software or a random number table) from the official school roster.

Problem 21. The collection of the ages of all the US first ladies when they married is an example of which of the following?

(a) Population (b) Sample (c) Parameter (d) Statistic

Problem 22. Suppose that the age of all the US first ladies when they married was recorded. The mean age of US first ladies when they married is an example of which of the following?

(a) Population (b) Sample (c) Parameter (d) Statistic

Problem 23. Researchers are interested in learning more about the age of women when they marry for the first time so they survey 500 married or divorced women and ask them how old they were when they first married. The collection of the ages of the 500 women when they first married is an example of which of the following?

(a) Population (b) Sample (c) Parameter (d) Statistic

Problem 24. We have calculated a confidence interval based on a sample of size n = 100. Now we want to get a better estimate with a margin of error that is only one-fourth as large. How large does our new sample need to be?

(a) 25 (b) 50 (c) 400 (d) 800 (e) 1600

Problem 25. A certain population is approximately Normal. We want to estimate its proportion, so we will collect (random) samples. Which should be true if we use a large sample size rather than a small one?

I. The mean of the sampling distribution will be stay approximately the same.

II. The sampling distribution of the sample proportions will be approximately Normal.

III. The variability of the sample proportions will be smaller.

(a) I only

(b) II only

(c) III only

(d) II and III only

(e) I, II, and III

Problem 26. Which of the following is not an assumption or condition that needs to be checked for the one-proportion *z*-test?

(a) The sample is randomly selected from the population.

(b) The observations within the sample are independent from each other.

(c) The population is Normal.

(d) The sample is large enough to expect at least ten successes and ten failures.

(e) The population size is at least ten times as large as the sample size.

Problem 27. We have calculated a 95% confidence interval and would prefer that our next confidence interval has a smaller margin of error without a decrease in confidence. In order to do this, we can:

I. change the z* multiplier to a smaller number.

II. take a larger random sample.

III. take a smaller random sample.

(a) I only

(b) II only

(c) III only

(d) I and II only

(e) I and III only

Problem 28. Which is true about a 98% confidence interval for a population proportion based on a given random sample?

I. We are 98% confident that the sample proportion is in our interval.

II. There is a 98% chance that our interval contains the population proportion.

III. The interval is wider than a 95% confidence interval for a population proportion would be.

(a) I only

(b) II only

(c) III only

(d) I and III only

(e) II and III only

Problem 29. When constructing a confidence interval, if the level of confidence increases the margin of error will _____ and the confidence interval will be _____. A larger sample size will improve the accuracy of the confidence interval, therefore the margin of error will _____ and the confidence interval will be _____.

(a) Decrease, wider. Increase, narrower

(b) Increase, narrower. Decrease, wider

(c) Decrease, narrower. Increase, wider

(d) Increase, wider. Decrease, narrower

(Problem 30-31) In a recent poll of 1100 randomly selected home delivery truck drivers, 26% said they had encountered an aggressive dog on the job at least once.

Problem 30. What is the margin of error, using a 95% confidence level, for estimating the true population proportion of home delivery truck drivers who have encountered an aggressive dog on the job at least once? (Round to the nearest thousandth)

(a) 0.013 (b) 0.053 (c) 0.026 (d) 0.004

Problem 31. Report the 95% confidence interval for the proportion of all home delivery truck drivers who have encountered an aggressive dog on the job at least once. (Round final calculations to the nearest tenth of a percent)

(a) (24.7 %, 27.3%) (b) (20.7%, 31.3%) (c) (23.4%, 28.6%) (d) None of these

Problem 32. Choose the statement that best describes what is meant when we say that the sample statistic is unbiased when estimating the population parameter.

(a) The sample statistic will always equal the population parameter.
(b) The standard deviation of the sampling distribution (also called the standard error) and the population standard deviation are equal.
(c) On average, the sample statistic is the same as the population parameter.
(d) The variation in the sample statistic is near zero.
(e) None of the above

Obtain the required confidence interval for the difference between two population proportions. Assume that independent simple random samples have been selected from the two populations.

Problem 33. A survey found that 27 of 71 randomly selected women and 48 of 72 randomly selected men follow a regular exercise program. Find a 95% confidence interval for the difference between the proportions of women and men who follow a regular exercise program.

(a) (-0.443, -0.130)

(b) (0.223, 0.537)

(c) (-0.473, 0.567)

(d) (0.194, 0.567)

Problem 34. A polling agency wants to estimate the proportion of U.S. citizens who support the president's domestic policies. They surveyed 2500 U.S. citizens and found a 95% confidence interval for the difference in proportions between men and women who support the president's domestic policies as (-0.025 to 0.050) where population 1 is men and population 2 is women. Select the correct interpretation of this result.

(a) The interval does not contain zero which shows that there is no significant difference in the proportions between men and women.

(b) The interval contains zero which shows that women are more likely than men to disagree with the president's foreign policies.

(c) The interval contains zero which shows that men are more likely than women to disagree with the president's foreign policies.

(d) The interval contains zero which shows that there is no significant difference in the proportions between men and women.

Problem 35. A statistics professor wants to see if more than 80% of her students were statistics major. At the beginning of the term, she takes a random sample of students from her large class and asks, in an anonymous survey, if the student's major is statistics. Which set of hypotheses should she test?

(a) $H0 : p < 0.80$ vs. $Ha : p > 0.80$

(b) $H0 : p = 0.80$ vs. $Ha : p > 0.80$

(c) $H0 : p > 0.80$ vs. $Ha : p = 0.80$

(d) $H0 : p = 0.80$ vs. $Ha : p \neq 0.80$

(e) $H0 : p = 0.80$ vs. $Ha : p < 0.80$

Problem 36. Suppose that the following hypotheses are to be tested: H_0: p = 0.25 and H_a: p > 0.25. Calculate the observed z-statistic for the following sample data: 40 out of 75 test subjects have the characteristic of interest. Round to the nearest hundredth.

(a) z = 1.88 (b) z = -4.33 (c) z = 5.67 (d) z = 2.81

Problem 37. A claim is made that the proportion of children who play sports is 0.5, and the sample statistics include 1600 subjects with 32% saying that they play a sport. Round to the nearest tenth.

(a) z = -9.6 (b) z = -14.4 (c) z = 12.3 (d) z = 16.8

Problem 38. A *p*-value indicates

(a) the probability that the null hypothesis is true.

(b) the probability that the alternative hypothesis is true.

(c) the probability of obtaining a test statistic as extreme or more extreme than the observed test statistic, given that the null hypothesis is true.

(d) the probability of obtaining a test statistic as extreme or more extreme than the observed test statistic, given that the alternative hypothesis is true.

(e) None of the above

Problem 39. Historical data reveals that 47% of all adult women think they do not get enough time for themselves. A recent opinion poll interviews 1025 randomly chosen women and records the sample proportion of women who do not feel that they get enough time for themselves. This statistic will vary from sample to sample if the poll is repeated. Suppose the true population proportion is 0.47. In what range will the middle 68% of all sample results fall for samples of size 1025?

(a) 0.314 to 0.626
(b) –1 to +1
(c) 0.548 to 0.822
(d) 0.454 to 0.486
(e) 0.439 to 0.501

Problem 40. A research firm carried out a hypothesis test on a population proportion using a right-sided alternative hypothesis. Which of the following z-scores would be associated with a p-value of 0.0301? Round to the nearest hundredth.

(a) z = -1.75 (b) z = 1.75 (c) z = 1.88 (d) z = -1.88

(Problem 41-42) A researcher is interested in studying the drinking habits of adults in a certain city. Suppose a recent study stated that the proportion of adults who reported drinking once a week or less in the last month was 0.26. The researcher's hypotheses for this test are H_0: p = 0.26 and H_a: p > 0.26. The researcher collected data from a random sample of 75 adults in the city and found that 12% among the sampled adults reported drinking once a week or less in the last month.

Problem 41. Check that the conditions hold so that the sampling distribution of the z-statistic will approximately follow the standard normal distribution. Are the conditions satisfied? If not, choose the condition that is not satisfied.

(a) No, the researcher did not collect a random sample.

(b) No, the researcher did not collect a large enough sample.

(c) No, the population of interest is not large enough.

(d) Yes, all the conditions are satisfied.

Problem 42. To continue the study into the drinking habits of adults, the researcher decides to collect data from adults working in "blue collar" jobs to see whether their drinking habits are in the same proportion as the general public. The null hypothesis for this test is H_0: p = 0.26 and the alternative hypothesis is H_a: p > 0.26. The researcher collected data from a random sample of 90 adults with "blue collar" jobs of which 32 stated that they drank once a week or less in the last month. Assume that the conditions that must be met in order for us to use the N(0, 1) distribution as the sampling distribution are satisfied. Find the values of the test statistic, and the p-value associated with the test statistic. Round all values in calculation to the nearest thousandth.

(a) z = 1.920, p-value = 0.027

(b) z = 2.087, p-value = 0.982

(c) z = 1.920, p-value = 0.973

(d) z = 2.087, p-value = 0.018

Problem 43. Suppose you are testing your friend to see whether she can tell the difference between the name brand and generic peanut butter. You give her 40 samples selected randomly, half from the name brand and half from the generic brand. The null hypotheses is that she is just guessing and should get about half right. Select all correct statement(s) about the two types of errors.

(a) The type II error would be saying that your friend can tell the difference between the two kinds of peanut butter, when she really cannot.

(b) The type I error would be saying that your friend can not tell the difference between the two kinds of peanut butter, when she really can.

(c) The type I error would be saying that your friend can tell the difference between the two kinds of peanut butter, when she really cannot.

(d) The type II error would be saying that your friend can not tell the difference between the two kinds of peanut butter, when she really can.

Problem 44. Which of the following is not a condition that must be checked before proceeding with a two-sample test?

(a) The samples must be independent of each other.

(b) Both samples must be large enough so that the product of each sample size n_1 and n_2 and the pooled estimate, phat, is greater than or equal to 10.

(c) Each sample must be from populations with the same standard deviation.

(d) Each sample must be a random sample.

Problem 45. A researcher believes that children who attend elementary school in a rural setting have lower obesity rates then children who attend elementary school in an urban setting. The researcher collects a random sample from each population and records the proportion of children in each sample who are clinically obese. The data is summarized in the table below. Assume that all conditions for proceeding with a two-sample test have been met.

Rural	Urban
$n_1 = 95$	$n_2 = 100$
$x_1 = 14$	$x_2 = 26$

Find the z-statistic (rounded to the nearest hundredth) and p-value (rounded to the nearest thousandth) for this hypothesis test.
Using a 5% significance level, state the correct conclusion regarding the null hypothesis H0: $p_{rural} = p_{urban}$.

(a) z =_____, p = _____. There is sufficient evidence to prove that the population proportions are the same.

(b) z = _____, p = _____. There is sufficient evidence to accept the null hypothesis.

(c) z = -1.95, p = 0.026. There is sufficient evidence to reject the null hypothesis.

(d) z = _____, p = _____. There is not sufficient evidence to reject the null hypothesis.

Standard Normal Probabilities

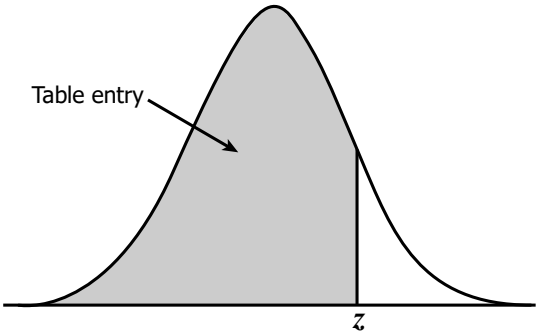

Table entry for z is the area under the standard normal curve to the left of z.

z	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
0.0	.5000	.5040	.5080	.5120	.5160	.5199	.5239	.5279	.5319	.5359
0.1	.5398	.5438	.5478	.5517	.5557	.5596	.5636	.5675	.5714	.5753
0.2	.5793	.5832	.5871	.5910	.5948	.5987	.6026	.6064	.6103	.6141
0.3	.6179	.6217	.6255	.6293	.6331	.6368	.6406	.6443	.6480	.6517
0.4	.6554	.6591	.6628	.6664	.6700	.6736	.6772	.6808	.6844	.6879
0.5	.6915	.6950	.6985	.7019	.7054	.7088	.7123	.7157	.7190	.7224
0.6	.7257	.7291	.7324	.7357	.7389	.7422	.7454	.7486	.7517	.7549
0.7	.7580	.7611	.7642	.7673	.7704	.7734	.7764	.7794	.7823	.7852
0.8	.7881	.7910	.7939	.7967	.7995	.8023	.8051	.8078	.8106	.8133
0.9	.8159	.8186	.8212	.8238	.8264	.8289	.8315	.8340	.8365	.8389
1.0	.8413	.8438	.8461	.8485	.8508	.8531	.8554	.8577	.8599	.8621
1.1	.8643	.8665	.8686	.8708	.8729	.8749	.8770	.8790	.8810	.8830
1.2	.8849	.8869	.8888	.8907	.8925	.8944	.8962	.8980	.8997	.9015
1.3	.9032	.9049	.9066	.9082	.9099	.9115	.9131	.9147	.9162	.9177
1.4	.9192	.9207	.9222	.9236	.9251	.9265	.9279	.9292	.9306	.9319
1.5	.9332	.9345	.9357	.9370	.9382	.9394	.9406	.9418	.9429	.9441
1.6	.9452	.9463	.9474	.9484	.9495	.9505	.9515	.9525	.9535	.9545
1.7	.9554	.9564	.9573	.9582	.9591	.9599	.9608	.9616	.9625	.9633
1.8	.9641	.9649	.9656	.9664	.9671	.9678	.9686	.9693	.9699	.9706
1.9	.9713	.9719	.9726	.9732	.9738	.9744	.9750	.9756	.9761	.9767
2.0	.9772	.9778	.9783	.9788	.9793	.9798	.9803	.9808	.9812	.9817
2.1	.9821	.9826	.9830	.9834	.9838	.9842	.9846	.9850	.9854	.9857
2.2	.9861	.9864	.9868	.9871	.9875	.9878	.9881	.9884	.9887	.9890
2.3	.9893	.9896	.9898	.9901	.9904	.9906	.9909	.9911	.9913	.9916
2.4	.9918	.9920	.9922	.9925	.9927	.9929	.9931	.9932	.9934	.9936
2.5	.9938	.9940	.9941	.9943	.9945	.9946	.9948	.9949	.9951	.9952
2.6	.9953	.9955	.9956	.9957	.9959	.9960	.9961	.9962	.9963	.9964
2.7	.9965	.9966	.9967	.9968	.9969	.9970	.9971	.9972	.9973	.9974
2.8	.9974	.9975	.9976	.9977	.9977	.9978	.9979	.9979	.9980	.9981
2.9	.9981	.9982	.9982	.9983	.9984	.9984	.9985	.9985	.9986	.9986
3.0	.9987	.9987	.9987	.9988	.9988	.9989	.9989	.9989	.9990	.9990
3.1	.9990	.9991	.9991	.9991	.9992	.9992	.9992	.9992	.9993	.9993
3.2	.9993	.9993	.9994	.9994	.9994	.9994	.9994	.9995	.9995	.9995
3.3	.9995	.9995	.9995	.9996	.9996	.9996	.9996	.9996	.9996	.9997
3.4	.9997	.9997	.9997	.9997	.9997	.9997	.9997	.9997	.9997	.9998

Standard Normal Probabilities

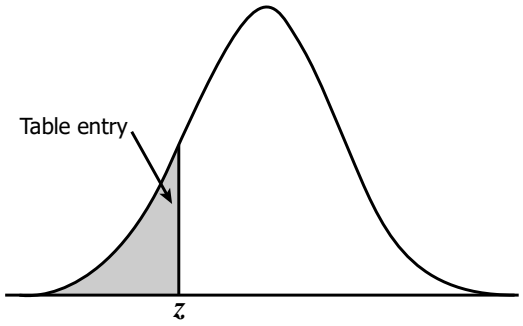

Table entry for z is the area under the standard normal curve to the left of z.

z	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
−3.4	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0002
−3.3	.0005	.0005	.0005	.0004	.0004	.0004	.0004	.0004	.0004	.0003
−3.2	.0007	.0007	.0006	.0006	.0006	.0006	.0006	.0005	.0005	.0005
−3.1	.0010	.0009	.0009	.0009	.0008	.0008	.0008	.0008	.0007	.0007
−3.0	.0013	.0013	.0013	.0012	.0012	.0011	.0011	.0011	.0010	.0010
−2.9	.0019	.0018	.0018	.0017	.0016	.0016	.0015	.0015	.0014	.0014
−2.8	.0026	.0025	.0024	.0023	.0023	.0022	.0021	.0021	.0020	.0019
−2.7	.0035	.0034	.0033	.0032	.0031	.0030	.0029	.0028	.0027	.0026
−2.6	.0047	.0045	.0044	.0043	.0041	.0040	.0039	.0038	.0037	.0036
−2.5	.0062	.0060	.0059	.0057	.0055	.0054	.0052	.0051	.0049	.0048
−2.4	.0082	.0080	.0078	.0075	.0073	.0071	.0069	.0068	.0066	.0064
−2.3	.0107	.0104	.0102	.0099	.0096	.0094	.0091	.0089	.0087	.0084
−2.2	.0139	.0136	.0132	.0129	.0125	.0122	.0119	.0116	.0113	.0110
−2.1	.0179	.0174	.0170	.0166	.0162	.0158	.0154	.0150	.0146	.0143
−2.0	.0228	.0222	.0217	.0212	.0207	.0202	.0197	.0192	.0188	.0183
−1.9	.0287	.0281	.0274	.0268	.0262	.0256	.0250	.0244	.0239	.0233
−1.8	.0359	.0351	.0344	.0336	.0329	.0322	.0314	.0307	.0301	.0294
−1.7	.0446	.0436	.0427	.0418	.0409	.0401	.0392	.0384	.0375	.0367
−1.6	.0548	.0537	.0526	.0516	.0505	.0495	.0485	.0475	.0465	.0455
−1.5	.0668	.0655	.0643	.0630	.0618	.0606	.0594	.0582	.0571	.0559
−1.4	.0808	.0793	.0778	.0764	.0749	.0735	.0721	.0708	.0694	.0681
−1.3	.0968	.0951	.0934	.0918	.0901	.0885	.0869	.0853	.0838	.0823
−1.2	.1151	.1131	.1112	.1093	.1075	.1056	.1038	.1020	.1003	.0985
−1.1	.1357	.1335	.1314	.1292	.1271	.1251	.1230	.1210	.1190	.1170
−1.0	.1587	.1562	.1539	.1515	.1492	.1469	.1446	.1423	.1401	.1379
−0.9	.1841	.1814	.1788	.1762	.1736	.1711	.1685	.1660	.1635	.1611
−0.8	.2119	.2090	.2061	.2033	.2005	.1977	.1949	.1922	.1894	.1867
−0.7	.2420	.2389	.2358	.2327	.2296	.2266	.2236	.2206	.2177	.2148
−0.6	.2743	.2709	.2676	.2643	.2611	.2578	.2546	.2514	.2483	.2451
−0.5	.3085	.3050	.3015	.2981	.2946	.2912	.2877	.2843	.2810	.2776
−0.4	.3446	.3409	.3372	.3336	.3300	.3264	.3228	.3192	.3156	.3121
−0.3	.3821	.3783	.3745	.3707	.3669	.3632	.3594	.3557	.3520	.3483
−0.2	.4207	.4168	.4129	.4090	.4052	.4013	.3974	.3936	.3897	.3859
−0.1	.4602	.4562	.4522	.4483	.4443	.4404	.4364	.4325	.4286	.4247
−0.0	.5000	.4960	.4920	.4880	.4840	.4801	.4761	.4721	.4681	.4641