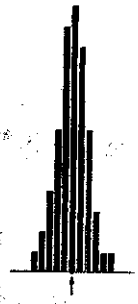
Statistics Topic Test
Tampa Bay Tech Invitational - January 29, 2000

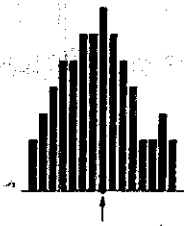
Note: For each of the following questions, answer E, NOTA, means "None of the Above."

1. Below are the histograms of the values taken by three sample statistics in several hundred samples from the sample population. The true value of the population parameter is marked in each histogram. The statistic(s) that has the largest bias among these three is

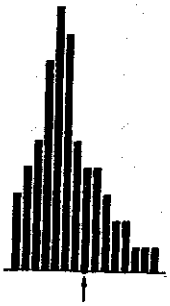
A



B

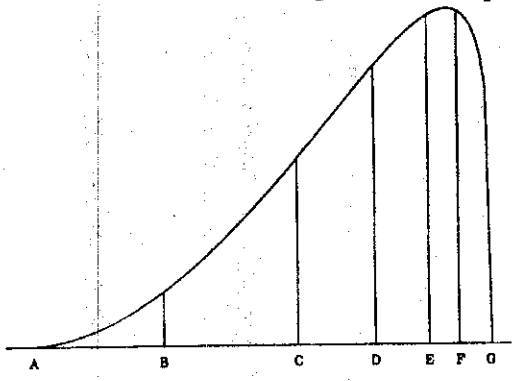


C



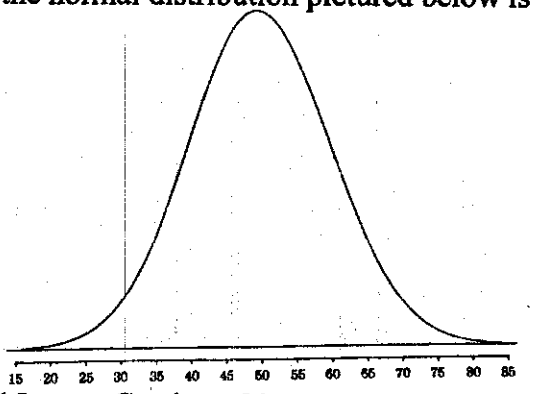
A. statistic A B. statistic B C. statistic C
D. B and C. They have similar bias that is larger than the bias of A E. NOTA

2. Five of the seven points marked on the density curve in the figure below make up the five-number summary for this distribution. Which two points is not part of the five-number summary?



A. B and E B. C and F C. C and E D. B and F E. NOTA

3. The standard deviation of the normal distribution pictured below is

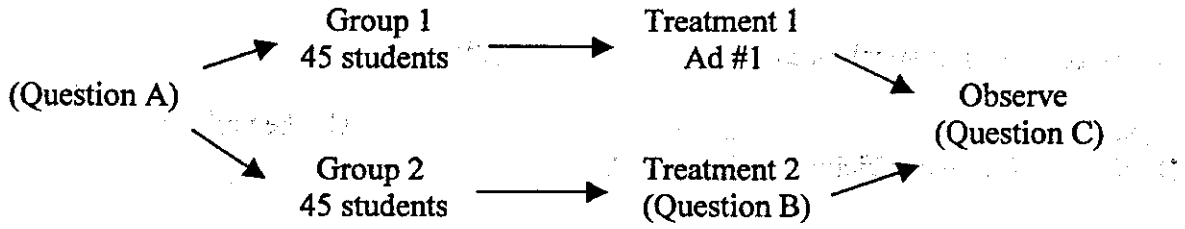


A. about 10 B. about 15 C. about 20 D. about 70 E. NOTA

Statistics Topic Test
Tampa Bay Tech Invitational - January 29, 2000

Use the following information for questions 4 -6

A study compares the effect on college students of two different TV advertisements for spring break in Gulf Shores, Alabama. Call the ads "Ad #1" and "Ad #2." We want to know which ad makes more students want to visit Gulf Shores during spring break. The design of the study looks like this:



4. The statistical name for this study design is

   A. simple random sample B. observational study C. matched pairs experiment
   D. randomized comparative experiment E. NOTA

5. The response variable should be named in the outline at (Question C). The response variable in this study is

   A. whether a student wants to visit Gulf Shores B. 90 college students
   C. which advertisement a student watched D. Ad #2 E. NOTA

6. Because all of the subjects were students at the same college, it isn't clear that the study results generalize to all college students. This is a question of

   A. the internal validity of the study B. the ethical standards of the study
   C. the bias of the study D. the external validity of the study E. NOTA

7. A study found correlation $r = 0.61$ between the sex of a worker and his or her income. You conclude that

   A. Women earn more than men on the average.
   B. Women earn less than men on the average.
   C. An arithmetic mistake was made; this is not a possible value of r.
   D. This is nonsense because r makes no sense here.
   E. NOTA

Statistics Topic Test
Tampa Bay Tech Invitational - January 29, 2000

8. An important use for *randomization* in designing experiments is that it tends to

   A. reduce confounding B. allow double blinding C. eliminate response error
   D. reduce the placebo effect E. NOTA

9. Which of these statistical measures can *never* be negative?

   A. the mean B. median C. the variance
   D. the correlation coefficient E. NOTA

10. In a large population of college students, 10% of the students have experiences feelings of math anxiety. If you take a random sample of 10 students from this population, the probability that exactly 2 students have experienced math anxiety is

    A. 0.3020 B. 0.2634 C. 0.2013 D. 0.5 E. NOTA

11. Is "Tartar Control" Crest toothpaste more effective at preventing tartar buildup on teeth than regular Crest toothpaste? Researchers recruit 200 volunteers (109 men and 91 women) who first get a free tooth cleaning. Then the researchers randomly assign 100 to the tartar control group and 100 to the regular toothpaste. All 200 people are given unmarked tubes of the appropriate toothpaste and instructed on how often to brush their teeth each day. They are not told which group they are in, and the two kinds of toothpaste look the same. After 6 months, they are rated on tartar buildup by dentists who don't know who was in each group. This is an example of

    A. a matched pairs design B. a completely randomized experiment
    C. a block design D. more than one of the above E. NOTA

12. An opinion poll asks a random sample of voters, "Do you think elected government officials are underpaid?" Suppose 25% of the population would respond "yes." If the sample size is 400, the probability that at least 90 respond "yes" is approximately

    A. 0.875 B. 0.125 C. 0.750 D. 0.225 E. NOTA

Statistics Topic Test
Tampa Bay Tech Invitational - January 29, 2000

13. A *simple random sample* is

    A. any sample selected by using chance.
    B. any sample that gives every individual the same chance to be selected.
    C. a sample that gives every possible sample of the same size the same chance to be selected.
    D. a sample that selects equal numbers of individuals from each stratum.
    E. NOTA

14. In an opinion poll, 25% of 200 people sampled said that they were strongly opposed to having a state lottery. The standard error of the sample proportion is approximately

    A. 0.03 B. 0.25 C. 0.00094 D. 0.6 E. NOTA

15. University X conducts a sample survey of families of undergraduate students to obtain their opinions about health insurance for students. A questionnaire is sent to a simple random sample of 100 families. One question asks for a response to the statement "University X should provide full medical insurance for students even if tuition must be raised to pay for it." The possible responses are (1) Strongly agree, (2) Agree, (3) Neutral, (4) Disagree, and (5) Strongly disagree. Suppose that a sample of size 900 (nine times as large) were taken. Let $\hat{p}$ be the proportion of families in the sample who strongly disagree that University X should provide full medical insurance. Compared with the sample of 100, a sample of 900 would make the standard deviation of $\hat{p}$

    A. nine times as large
    B. one-ninth as large
    C. three times as large
    D. one-third as large
    E. NOTA

Use the following information to answer questions 16 and 17

A medical researcher collects health data on many women in each of several countries. One of the variables measured for each woman in the study is her weight in pounds. The following list gives the five-number summary for the weights of the women in each of several countries. The first and last numbers for each country are the lower and upper deciles (10^{th} and 90^{th} percentiles).

Country A: 100, 110, 120, 160, 200
Country B: 113, 135, 151, 185, 240
Country C: 84, 96, 110, 124, 136
Country D: 100, 143, 182, 191, 200

16. In one of these countries the weights of women are approximately normally distributed. Which country is it?

    A. Country A B. Country B C. Country C D. Country D E. NOTA

17. In one of the four countries, the mean weight of women is less than the median weight. Which country is it most likely to be?

A. Country A B. Country B C. Country C D. Country D E. NOTA

Use the following information to answer questions 18 - 19

A medical researcher wishes to study the effects of vitamin C and of zinc on people's susceptibility to colds. She has 100 male subjects and 88 female subjects. The males are divided up according to age into 25 groups of 4. Thus, the first group consists of the 4 youngest men, the second group consists of the next youngest, ..., and the last group contains the 4 oldest men. The women are likewise divided up according to age into 22 groups of 4. From each of the 47 groups, one person is chosen at random to get treatment A (both vitamin C and zinc in a single tablet), another is chosen at random to get treatment B (only zinc), another chosen at random gets treatment C (vitamin C only), and the remaining person gets treatment D (placebo). The subjects are then observed for six months to see how many colds they get.

18. This is an example of

A. biased measurement, since there are more male subjects than female subjects.
B. a block design.
C. a complete randomized design.
D. an observational study, since the subjects are observed for six months.
E. NOTA

19. The response variable is

A. sex B. vitamin C C. 188, since the experiment studies the response of 188 subjects D. more than one of the above E. NOTA

Use the information below to answer questions 20-21

A copy machine dealer has data on the number of x copy machines at each of 89 customer locations and the number y of service calls in a month at each location. Summary calculations give $\bar{x} = 8.4$, $s_x = 2.1$, $\bar{y} = 14.2$, $s_y = 3.8$, and $r = .86$.

20. What is the slope of the least squares regression line of number of service calls on number of copiers?

A. 0.86 B. 1.56 C. 0.48 D. can't be determined E. NOTA

21. About what percent of the variation in number of service calls is explained by the linear relation between number of service calls and number of machines?

A. 86% B. 93% C. 74% D. can't be determined E. NOTA

Statistics Topic Test
Tampa Bay Tech Invitational - January 29, 2000

Use the information below to answer questions 22 – 23
In a population of students, the number of calculators owned is a random variable X with $P(X=0) = 0.2$, $P(X=1) = 0.6$, and $P(X=2) = 0.2$

22. The mean of this probability distribution is

A. 0 B. 2 C. 1 D. 0.5 E. NOTA

23. The variance for this probability distribution is

A. 1 B. 0.63 C. 0.5 D. 0.4 E. NOTA

24. An instant lottery game gives you probability of 0.02 of winning on any one play. Plays are independent of each other. If you play 5 times, what is the probability that you win at least once?

A. 0.0961 B. 0.0922 C. 0.9039 D. 0.1 E. NOTA

25. You want to design a study to estimate the proportion of students on your campus who agree the statement, "The student government is an effective organization for expressing the needs of students to the administration." You will use a 95% confidence interval and you would like the margin of error to be 0.05 or less. The minimum sample size required is approximately

A. 22 B. 1795 C. 385 D. 271 E. NOTA

26. To use the two-sample t procedure to perform a significance test on the difference between two means, we assume

A. the population standard deviations are known
B. the samples from each population are independent
C. the distributions are exactly normal in each population
D. the sample sizes are large
E. NOTA

Statistics Topic Test
Tampa Bay Tech Invitational - January 29, 2000

Use the following information for problems 27-28
A simple linear regression was used to predict the score y on a final exam from the score x on the first exam. The slope of the least squares regression line is 0.75. The standard error of the slope is 0.11 and the sample size is 200.

27. A 90% confidence interval for the true slope is

A. 0.64 to 0.86 B. 0.53 to 0.97 C. 0.57 to 0.93 D. –0.64 to 0.86 E. NOTA

28. To test the null hypothesis that the slope is zero versus the one-sided alternative that the slope is positive, we use the statistic t =

A. 0.05 B. 0.15 C. 0.95 D. 0.75 E. NOTA

29. You want to estimate the mean SAT score for a population of students with a 90% confidence interval. Assume that the population standard deviation is $\sigma = 100$. If you want the margin of error to be approximately 10, you will need a sample size of

A. 16 B. 271 C. 38 D. 1476 E. NOTA

30. You have measured the systolic blood pressure of a random sample of 25 employees of a company located near you. A 95% confidence interval of the mean systolic blood pressure for the employees of this company is (122,138). Which of the following statements gives a valid interpretation of this interval?

A. 95% of the sample of employees has a systolic blood pressure between 122 and 138
B. 95% of the population of employees has a systolic blood pressure between 122 and 138
C. If the procedure were repeated many times, 95% of the resulting confidence intervals would contain the population mean systolic blood pressure.
D. If the procedure were repeated many times, 95% of the sample means would be between 122 and 138.
E. NOTA

Table entry for p and C is the point t^* with probability p lying above it and probability C lying between $-t^*$ and t^*.

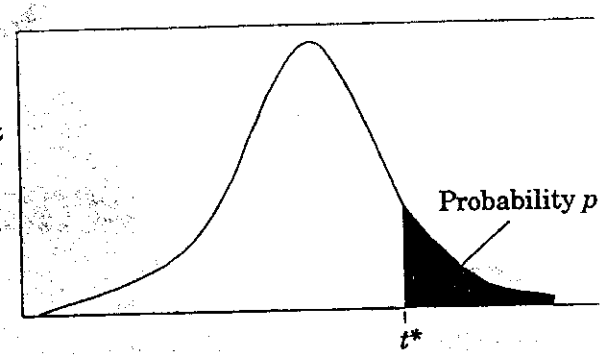


Table B

t distribution critical values

	Tail probability p											
df	.25	.20	.15	.10	.05	.025	.02	.01	.005	.0025	.001	.0005
1	1.000	1.376	1.963	3.078	6.314	12.71	15.89	31.82	63.66	127.3	318.3	636.6
2	.816	1.061	1.386	1.886	2.920	4.303	4.849	6.965	9.925	14.09	22.33	31.60
3	.765	.978	1.250	1.638	2.353	3.182	3.482	4.541	5.841	7.453	10.21	12.92
4	.741	.941	1.190	1.533	2.132	2.776	2.999	3.747	4.604	5.598	7.173	8.610
5	.727	.920	1.156	1.476	2.015	2.571	2.757	3.365	4.032	4.773	5.893	6.869
6	.718	.906	1.134	1.440	1.943	2.447	2.612	3.143	3.707	4.317	5.208	5.959
7	.711	.896	1.119	1.415	1.895	2.365	2.517	2.998	3.499	4.029	4.785	5.408
8	.706	.889	1.108	1.397	1.860	2.306	2.449	2.896	3.355	3.833	4.501	5.041
9	.703	.883	1.100	1.383	1.833	2.262	2.398	2.821	3.250	3.690	4.297	4.781
10	.700	.879	1.093	1.372	1.812	2.228	2.359	2.764	3.169	3.581	4.144	4.587
11	.697	.876	1.088	1.363	1.796	2.201	2.328	2.718	3.106	3.497	4.025	4.437
12	.695	.873	1.083	1.356	1.782	2.179	2.303	2.681	3.055	3.428	3.930	4.318
13	.694	.870	1.079	1.350	1.771	2.160	2.282	2.650	3.012	3.372	3.852	4.221
14	.692	.868	1.076	1.345	1.761	2.145	2.264	2.624	2.977	3.326	3.787	4.140
15	.691	.866	1.074	1.341	1.753	2.131	2.249	2.602	2.947	3.286	3.733	4.073
16	.690	.865	1.071	1.337	1.746	2.120	2.235	2.583	2.921	3.252	3.686	4.015
17	.689	.863	1.069	1.333	1.740	2.110	2.224	2.567	2.898	3.222	3.646	3.965
18	.688	.862	1.067	1.330	1.734	2.101	2.214	2.552	2.878	3.197	3.611	3.922
19	.688	.861	1.066	1.328	1.729	2.093	2.205	2.539	2.861	3.174	3.579	3.883
20	.687	.860	1.064	1.325	1.725	2.086	2.197	2.528	2.845	3.153	3.552	3.850
21	.686	.859	1.063	1.323	1.721	2.080	2.189	2.518	2.831	3.135	3.527	3.819
22	.686	.858	1.061	1.321	1.717	2.074	2.183	2.508	2.819	3.119	3.505	3.792
23	.685	.858	1.060	1.319	1.714	2.069	2.177	2.500	2.807	3.104	3.485	3.768
24	.685	.857	1.059	1.318	1.711	2.064	2.172	2.492	2.797	3.091	3.467	3.745
25	.684	.856	1.058	1.316	1.708	2.060	2.167	2.485	2.787	3.078	3.450	3.725
26	.684	.856	1.058	1.315	1.706	2.056	2.162	2.479	2.779	3.067	3.435	3.707
27	.684	.855	1.057	1.314	1.703	2.052	2.158	2.473	2.771	3.057	3.421	3.690
28	.683	.855	1.056	1.313	1.701	2.048	2.154	2.467	2.763	3.047	3.408	3.674
29	.683	.854	1.055	1.311	1.699	2.045	2.150	2.462	2.756	3.038	3.396	3.659
30	.683	.854	1.055	1.310	1.697	2.042	2.147	2.457	2.750	3.030	3.385	3.646
40	.681	.851	1.050	1.303	1.684	2.021	2.123	2.423	2.704	2.971	3.307	3.551
50	.679	.849	1.047	1.299	1.676	2.009	2.109	2.403	2.678	2.937	3.261	3.496
60	.679	.848	1.045	1.296	1.671	2.000	2.099	2.390	2.660	2.915	3.232	3.460
80	.678	.846	1.043	1.292	1.664	1.990	2.088	2.374	2.639	2.887	3.195	3.416
100	.677	.845	1.042	1.290	1.660	1.984	2.081	2.364	2.626	2.871	3.174	3.390
1000	.675	.842	1.037	1.282	1.646	1.962	2.056	2.330	2.581	2.813	3.098	3.300
∞	.674	.841	1.036	1.282	1.645	1.960	2.054	2.326	2.576	2.807	3.091	3.291
	50%	60%	70%	80%	90%	95%	96%	98%	99%	99.5%	99.8%	99.9%
	Confidence level C											

Table entry for p is the point (χ^2) with probability p lying above it.

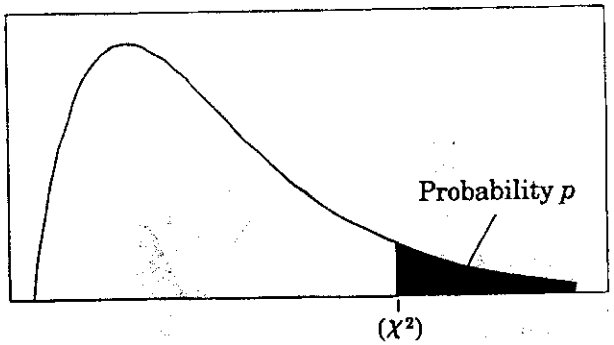


Table C

χ^2 critical values

	Tail probability p										
df	.25	.20	.15	.10	.05	.025	.02	.01	.005	.0025	.001
1	1.32	1.64	2.07	2.71	3.84	5.02	5.41	6.63	7.88	9.14	10.83
2	2.77	3.22	3.79	4.61	5.99	7.38	7.82	9.21	10.60	11.98	13.82
3	4.11	4.64	5.32	6.25	7.81	9.35	9.84	11.34	12.84	14.32	16.27
4	5.39	5.99	6.74	7.78	9.49	11.14	11.67	13.28	14.86	16.42	18.47
5	6.63	7.29	8.12	9.24	11.07	12.83	13.39	15.09	16.75	18.39	20.51
6	7.84	8.56	9.45	10.64	12.59	14.45	15.03	16.81	18.55	20.25	22.46
7	9.04	9.80	10.75	12.02	14.07	16.01	16.62	18.48	20.28	22.04	24.32
8	10.22	11.03	12.03	13.36	15.51	17.53	18.17	20.09	21.95	23.77	26.12
9	11.39	12.24	13.29	14.68	16.92	19.02	19.68	21.67	23.59	25.46	27.88
10	12.55	13.44	14.53	15.99	18.31	20.48	21.16	23.21	25.19	27.11	29.59
11	13.70	14.63	15.77	17.28	19.68	21.92	22.62	24.72	26.76	28.73	31.26
12	14.85	15.81	16.99	18.55	21.03	23.34	24.05	26.22	28.30	30.32	32.91
13	15.98	16.98	18.20	19.81	22.36	24.74	25.47	27.69	29.82	31.88	34.53
14	17.12	18.15	19.41	21.06	23.68	26.12	26.87	29.14	31.32	33.43	36.12
15	18.25	19.31	20.60	22.31	25.00	27.49	28.26	30.58	32.80	34.95	37.70
16	19.37	20.47	21.79	23.54	26.30	28.85	29.63	32.00	34.27	36.46	39.25
17	20.49	21.61	22.98	24.77	27.59	30.19	31.00	33.41	35.72	37.95	40.79
18	21.60	22.76	24.16	25.99	28.87	31.53	32.35	34.81	37.16	39.42	42.31
19	22.72	23.90	25.33	27.20	30.14	32.85	33.69	36.19	38.58	40.88	43.82
20	23.83	25.04	26.50	28.41	31.41	34.17	35.02	37.57	40.00	42.34	45.31
21	24.93	26.17	27.66	29.62	32.67	35.48	36.34	38.93	41.40	43.78	46.80
22	26.04	27.30	28.82	30.81	33.92	36.78	37.66	40.29	42.80	45.20	48.27
23	27.14	28.43	29.98	32.01	35.17	38.08	38.97	41.64	44.18	46.62	49.73
24	28.24	29.55	31.13	33.20	36.42	39.36	40.27	42.98	45.56	48.03	51.18
25	29.34	30.68	32.28	34.38	37.65	40.65	41.57	44.31	46.93	49.44	52.62
26	30.43	31.79	33.43	35.56	38.89	41.92	42.86	45.64	48.29	50.83	54.05
27	31.53	32.91	34.57	36.74	40.11	43.19	44.14	46.96	49.64	52.22	55.48
28	32.62	34.03	35.71	37.92	41.34	44.46	45.42	48.28	50.99	53.59	56.89
29	33.71	35.14	36.85	39.09	42.56	45.72	46.69	49.59	52.34	54.97	58.30
30	34.80	36.25	37.99	40.26	43.77	46.98	47.96	50.89	53.67	56.33	59.70
40	45.62	47.27	49.24	51.81	55.76	59.34	60.44	63.69	66.77	69.70	73.40
50	56.33	58.16	60.35	63.17	67.50	71.42	72.61	76.15	79.49	82.66	86.66
60	66.98	68.97	71.34	74.40	79.08	83.30	84.58	88.38	91.95	95.34	99.61
80	88.13	90.41	93.11	96.58	101.9	106.6	108.1	112.3	116.3	120.1	124.8
100	109.1	111.7	114.7	118.5	124.3	129.6	131.1	135.8	140.2	144.3	149.4

Table entry for z is the probability lying below z.

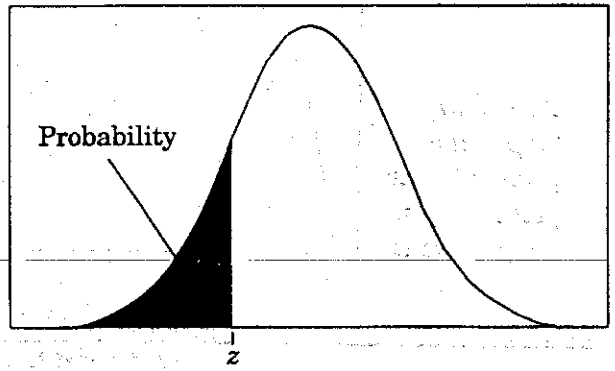


Table A Standard normal probabilities

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

Table entry for z is the probability lying below z.

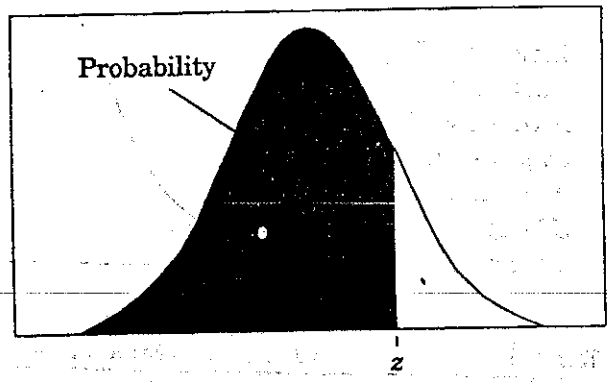


Table A *(Continued)*

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