Print Your Name: _____

For all problems, choose the answer that BEST answers the question.

1) One year, a survey asked the French people the following question, "How many cars do you have?" Of the 965 people who responded, 89% reported having exactly 1 car. What is the population for this survey?

   A) The population is 89% who reported having exactly 1 child.
   B) The population is all of the people in the world.
   C) The population is the 965 people who responded.
   D) The population is the French people who have cars.
   E) The population is the French public.

2) The characteristics observed to address the questions posed in a study are called:

   A) variables.
   B) statistics.
   C) parameters.
   D) population.
   E) sample.

3) To estimate the percentage of defective items a machine is producing, a quality control analyst inspects the first 100 items produced in a day. This technique produces a random sample.

   A) True
   B) False

4) Which of the following is a continuous variable?

   A) brand of clothing
   B) number of touchdowns thrown in a professional quarterback's career
   C) number of jelly beans in a jar
   D) nightly low temperature in Miami
   E) type of fish caught

5) Which of the following graphical methods cannot be used to summarize a quantitative data set?

   A) a stem-and-leaf plot
   B) a bar graph
   C) a histogram
   D) a frequency table
   E) a dot plot

6) SAT verbal scores are normally distributed with a mean of 433 and a standard deviation of 90. Use the Empirical Rule to determine what percent of the scores lie between 253 and 433.

   A) 95%
   B) 47.5%
   C) 34%
   D) 68%
   E) 50%

7) The age at inauguration for the last 11 U.S. presidents is given below. Find the median age.

President	Age
Obama	47
G. W. Bush	54
Clinton	46
G. H. W. Bush	64
Reagan	69
Carter	52
Ford	61
Nixon	56
L. B. Johnson	55
Kennedy	43
Eisenhower	62

A) 55.36 years
B) 54.5 years
C) 55 years
D) 55.5 years

8) Which of the following numerical summary measures is not sensitive to outliers in a dataset?

A) range
B) interquartile range
C) mean
D) none of these
E) standard deviation

9) A(n) _____ is a variable, usually unobserved, that influences the association between the variables of primary interest.

A) independent variable
B) predictor variable
C) lurking variable
D) explanatory variable
E) response variable

10) A regression line for predicting the selling prices of homes in Chicago is $\hat{y} = 168 + 102x$, where x is the square footage of the house. Interpret the residual for a house with 1800 square feet that recently sold for $200,000.

A) The house sold for $16,232 less than was to be expected from the regression equation.
B) The house sold for $16,400 more than was to be expected from the regression equation.
C) The house sold for $16,400 less than was to be expected from the regression equation.
D) The house sold for $16,232 more than was to be expected from the regression equation.
E) The house sold for $16,064 more than was to be expected from the regression equation.

11) Determine the type of association apparent in the following scatterplot.
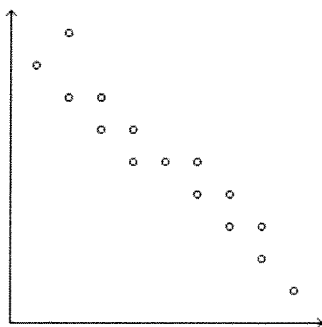
   A) Negative association, linear association, very strong association
   B) Negative association, linear association, weak association
   C) Negative association, moderately strong association
   D) Linear association, very strong association
   E) Linear association, moderately strong association

12) A psychologist does an experiment to determine whether an outgoing person can be identified by his or her handwriting. She claims that the correlation of 0.89 shows that there is a strong causal relationship between personality type and handwriting. Explain what is wrong with her interpretation.

   A) This value for the correlation proves only that there is a weak causal relationship between personality type and handwriting.
   B) Finding an association between personality type and handwriting does not imply a causal connection. The high correlation could also be due to an outlier.
   C) This value for the correlation proves that there is not a causal relationship between personality type and handwriting.
   D) Her interpretation is correct.
   E) This value for the correlation does not show any association between personality type and handwriting.

13) For the teams in a baseball league during the regular season, the correlation between the number of wins and a number of other variables is as follows: 0.51 for shutouts, 0.61 for hits made, -0.70 for runs allowed and -0.56 for homeruns allowed.
   Which variable has the weakest linear association with number of wins?

   A) homeruns allowed
   B) hits made
   C) runs allowed
   D) shutouts

14) A random spinner has equal-sized regions numbered 1 through 18. What is the probability that the spinner stops on either an even number or a multiple of 3?

   A) 1.5
   B) 2/3
   C) 1/2
   D) 1
   E) 1/3

15) The probability that a student at a certain college is female is 0.52. The probability that a student at that college has a job off-campus is 0.28. The probability that a student at that college is female and works off-campus is 0.13. If a student is chosen at random from the college, what is the probability that the student is female or has an off-campus job?

A) 0.13
B) 0.33
C) 0.80
D) 0.67
E) 0.20

16) Two shipments of components were received by a factory and stored in two separate bins. Shipment I has 2% of its contents defective, while shipment II has 5% of its contents defective. Any randomly selected component is equally likely to come from shipment I as from shipment II. Given that a randomly selected component is defective, what is the probability it came from shipment II?

A) 0.714
B) 0.050
C) 0.384
D) 0.286
E) 0.500

17) For two events A and B, P(A)=0.3, P(B)=0.7, and P(A and B)=0.21. It follows that A and B are:

A) disjoint but not independent.
B) neither disjoint nor independent.
C) independent but not disjoint.
D) complementary.
E) both disjoint and independent.

18) If A and B are independent events, with P(A) = 1 / 7, P(B) = 2 / 7, then P(A or B) equals _____ ?

A) Cannot be determined from the given information
B) 3 / 7
C) 19 / 49
D) 23 / 49
E) 2 / 49

19) Both parents are carriers for an inheritable trait so that the probability their child possesses the trait is 0.20. Given that the couple has 5 children, which of the following is true?

A) Exactly one of the children must possess the trait.
B) It is possible that none of the 5 children possess the trait.
C) It is impossible that all four children possess the trait.
D) At least two of the children must possess the trait.

20) The random variable X is the number of siblings for a student randomly selected from a particular high school. Its probability distribution is given in the table below. Calculate the mean of X.

x	0	1	2	3	4	5
P(X = x)	5 / 24	3 / 8	4 / 18	1 / 8	1 / 24	1 / 36

    A) 1.0
    B) 2.5
    C) 1.5
    D) 2.0

21) Find the z-score with area/probability of 0.86 *to its left* under the standard normal curve.

    A) 0.5557
    B) -1.08
    C) 1.08
    D) 0.8051
    E) -0.5557

22) A multiple choice exam has 10 questions, each of which has 5 possible answers, only one of which is correct. If Hugo, who forgot to study for the exam, guesses on all questions, what is the probability that he will answer exactly 3 questions correctly?

    A) 0.008
    B) 0.96
    C) 0.08
    D) 0.201
    E) 0.0017

23) Assume that the weights of quarters are normally distributed with a mean of 5.67 g and a standard deviation 0.070 g. A vending machine will only accept coins weighing between 5.48 g and 5.82 g. What percentage of legal quarters will be rejected?

    A) 0.0196%
    B) 4.85%
    C) 0.981%
    D) 98.1%
    E) 1.96%

24) In one region, the September energy consumption levels for single-family homes had a mean of 1050 kWh and a standard deviation of 218 kWh. Describe the center and spread of the sampling distribution of the sample mean for a random sample of 50 single-family homes from this region.

A) mean = 1050, standard error = 218
B) mean = 148.5, standard error = 4.36
C) mean = 1050, standard error = 4.36
D) mean = 148.5, standard error = 218
E) mean = 1050, standard error = 30.83

25) Assume that the heights of female TTU student have a mean of 63.6 inches and a standard deviation of 2.5 inches. If 100 female TTU students are randomly selected, find the probability that they have a mean height greater than 63.0 inches.

A) not enough information to determine
B) 0.0082
C) 0.8989
D) 0.9918
E) 0.2881

26) According to an exit poll taken by CNN during the 2008 Democratic Primary in Connecticut, 552 registered voters voted for Hilary Clinton and 598 for Barack Obama. Would you have been willing to predict Obama as the winner?

A) Yes, 0.52 > 0.50
B) No, z ≈ 0
C) Yes, z = 1.36
D) No, z = 1.36
E) No, the sample size is too small to make inferences about the population

27) If possible, use the normal approximation to the binomial to determine the approximate probability of observing between 40 and 60 heads when you flip a fair (p=0.5) coin 100 times?

A) 0.68
B) 0.475
C) 0.95
D)   0.997
E) You cannot approximate the binomial with the normal under these conditions.

28) Of 369 randomly selected medical students, 23 said that they planned to work in a rural community. 95% confidence interval for the percentage of all medical students who plan to work in a rural community was found as (3.77%, 8.70%). Find the margin of error.

A) 4.930%
B) 2.465%
C) 2.000%
D) 1.254%
E) 0.025%

29) A laboratory tested twelve chicken eggs and found that the mean amount of cholesterol was 246 milligrams with s = 11.7 milligrams. Construct a 95% confidence interval for the true mean cholesterol content of all such eggs.

A) (238.6, 253.4)
B) (239.9, 252.1)
C) (238.6, 254.0)
D) (239.9, 253.4)

30) When a higher confidence level is used to estimate a proportion and all other factors involved are held constant:

A) the confidence interval will be less likely to contain the parameter being estimated.
B) the confidence interval will be narrower.
C) the confidence interval will not be affected.
D) the confidence interval will be wider.
E) there is not enough information to determine the effect on the confidence interval.

31) In 2006, the General Social Survey asked 920 respondents "how much do you favor or oppose requiring car makers to make cars and trucks that use less gasoline?" Their responses are given in the table below. Based on these responses, find a point estimate for the population proportion who neither favor nor oppose requiring car makers to make cars and trucks that use less gasoline.

Strongly favor	648
Favor	197
Neither favor nor oppose	52
Oppose	14
Strongly oppose	9

A) 0.21
B) 0.06
C) 0.84
D) 0.94

32) In a survey of 180 Tech students, 126 said they know where the math building is. Construct a 95% confidence interval for the proportion of students who claim they know where the math building is.

A) (0.633, 0.700)
B) (0.700, 0.767)
C) (0.633, 0.767)
D) (0.600, 0.700)

33) A random sample of clients at a weight loss center was given a dietary supplement to see if it would promote weight loss. The center reported that the 100 clients lost an average of 46 pounds, and that a 95% confidence interval for the mean weight loss this supplement produced has a margin of error of ±9 pounds. Interpret the confidence interval.

A) 95% of the people who use this supplement will lose at least 37 pounds.
B) We are 95% sure that the average weight loss among the clients in this study was between 37 and 55 pounds.
C) 95% of the people who use this supplement will lose between 37 and 55 pounds.
D) The average weight loss of clients who take this supplement will be between 37 and 55 pounds.
E) We are 95% confident that the mean weight loss produced by the supplement in weight loss center clients is between 37 and 55 pounds.

34) In the past, the mean lifetime of a certain type of radio battery has been 9.8 hours. The manufacturer has introduced a change in the production method and wants to perform a significance test to determine whether the mean lifetime has increased as a result. The hypotheses are:

$$H_0: \mu = 9.8 \text{ hours}$$
$$H_a: \mu > 9.8 \text{ hours}$$

Explain the meaning of a Type I error.

A) Concluding that $\mu < 9.8$ hours when in fact $\mu > 9.8$ hours
B) Concluding that $\mu = 9.8$ hours when in fact $\mu > 9.8$ hours
C) Concluding that $\mu > 9.8$ hours when in fact $\mu > 9.8$ hours
D) Concluding that $\mu > 9.8$ hours when in fact $\mu = 9.8$ hours
E) Concluding that $\mu = 9.8$ hours when in fact $\mu < 9.8$ hours

35) At Lubbock High, the average amount of time tenth grade students spend watching television each week is 23.7 hours. The principal introduces a campaign to encourage the students to watch less television. One year later, the principal wants to perform a hypothesis test to determine whether the average amount of time spent watching television per week has decreased. Choose the correct hypotheses to test for this problem.

A) $H_0: \mu = 23.7$ hours $H_a: \mu \leq 23.7$ hours
B) $H_0: \mu < 23.7$ hours $H_a: \mu > 23.7$ hours
C) $H_0: \mu < 23.7$ hours $H_a: \mu = 23.7$ hours
D) $H_0: \mu = 23.7$ hours $H_a: \mu < 23.7$ hours
E) $H_0: \mu = 23.7$ hours $H_a: \mu > 23.7$ hours

36) In the past, the mean lifetime for a certain type of flashlight battery has been 9.3 hours. The manufacturer has introduced a change in the production method and wants to perform a significance test to determine whether the mean lifetime has increased as a result. Classify the significance test as:

A) Left-Tailed
B) Middle-Tailed
C) Right-Tailed
D) Two-Tailed

37) A journal article reports that 34% of American fathers take no responsibility for child care. A researcher claims that the figure is higher for fathers in Lubbock. A random sample of 233 fathers from this town yielded 96 who did not help with child care. Do the data provide sufficient evidence to conclude that in this town the proportion is higher than 0.34? Use a 0.05 significance level.

P-Value = 0.0102. State your conclusion in terms of H_0.

A) Since the P-value < α, we are unable to conclude that the proportion of fathers who take no responsibility for childcare is higher than 34% in this town.
B) Since the P-value < 0.34, we can conclude that the proportion of fathers who take no responsibility for childcare is higher than 34% in this town.
C) Since the P-value < α, we can conclude that the proportion of fathers who take no responsibility for childcare is 41%.
D) Since the P-value < α, we can conclude that the proportion of fathers who take no responsibility for childcare is higher than 34% in this town.
E) Since the P-value < 0.34, we are unable to conclude that the proportion of fathers who take no responsibility for childcare is higher than 34% in this town.

38) Test the claim that for the population of female college students at a particular university, the mean weight is given by $\mu = 132$ lb. Sample data are summarized as $n = 20$, $\bar{x} = 137$ lb, and $s = 14.2$ lb. Using a significance level of = 0.1, obtain the test statistic and state your conclusion about H_0.

A) $t = 1.57$, do not reject H_0
B) $z = -1.57$, do not reject H_0
C) $t = -1.57$, reject H_0
D) $z = 1.57$, do not reject H_0
E) $t = 1.57$, reject H_0

39) In a random sample of 140 forty-year-old women, 25% are smokers. Find the P-Value for testing the claim that the percentage of forty-year-old women that smoke is 22%.

A) 0.02
B) 0.28
C) 0.19
D) 0.39
E) 0.13

40) A large P-value indicates which of the following?
   I.   the data do not support the alternative hypothesis
   II. the null hypothesis is true
   III. a larger sample size is needed to reject the null hypothesis
   IV. the alternative hypothesis is true

   A) I only
   B) II only
   C) III only
   D) IV only
   E) both I and II

41) From the sample statistics shown below, find the value of $\hat{p}_1 - \hat{p}_2$, the point estimate of the difference of proportions.
$$n_1 = 100, x_1 = 26, n_2 = 50, x_1 = 22,$$

   A) 0.18
   B) -0.18
   C) 0.04
   D) -0.04

42) A researcher wishes to determine whether people with high blood pressure can reduce their blood pressure by following a particular diet. Use the sample data below to calculate the test statistic for testing versus and give your conclusion based on a significance level of 0.05. Assume equal population standard deviations.

Treatment Group:
$n_1 = 40$
$\bar{x}_1 = 189.1$
$s_1 = 35.0$

Control Group:
$n_2 = 80$
$\bar{x}_2 = 203.7$
$s_2 = 39.2$

   A) t = -1.99; Fail to reject the null hypothesis; we are unable to conclude that the mean blood pressure is lower for those on the diet than for the control group.
   B) t = -2.07; Reject the null hypothesis and conclude that the mean blood pressure is lower for those on the diet than for the control group.
   C) t = -2.07; Fail to reject the null hypothesis; we are unable to conclude that the mean blood pressure is lower for those on the diet than for the control group.
   D) t = -1.99; Reject the null hypothesis and conclude that the mean blood pressure is lower for those on the diet than for the control group.

APPENDIX A
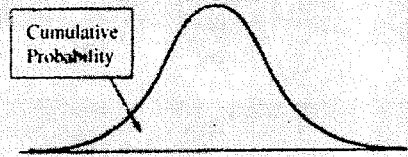
Cumulative Probability

Cumulative probability for z is the area under the standard normal curve to the left of z

TABLE A Standard Normal Cumulative Probabilities

z	.00
-5.0	.000000287
-4.5	.00000340
-4.0	.0000317
-3.5	.000233

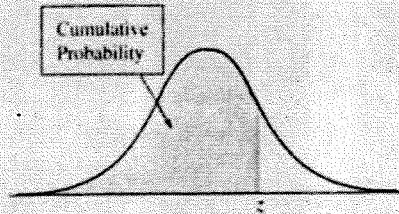| z	.00	.01	.02	.03	.04	.05	.06	.07	.08	.09
-3.4	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.0002
-3.3	.0005	.0005	.0005	.0004	.0004	.0004	.0004	.0004	.0004	.0003
-3.2	.0007	.0007	.0006	.0006	.0006	.0006	.0006	.0005	.0005	.0005
-3.1	.0010	.0009	.0009	.0009	.0008	.0008	.0008	.0008	.0007	.0007
-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

Cumulative probability for z is the area under the standard normal curve to the left of z

TABLE A Standard Normal Cumulative Probabilities (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

z	.00
3.5	.999767
4.0	.9999683
4.5	.9999966
5.0	.999999713

Right Tail Probability
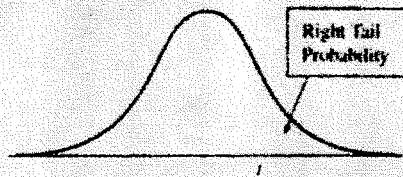
TABLE B t Distribution Critical Values

	Confidence Level					
	80%	90%	95%	98%	99%	99.8%
	Right-Tail Probability					
df	$t_{.100}$	$t_{.050}$	$t_{.025}$	$t_{.010}$	$t_{.005}$	$t_{.001}$
1	3.078	6.314	12.706	31.821	63.656	318.289
2	1.886	2.920	4.303	6.965	9.925	22.328
3	1.638	2.353	3.182	4.541	5.841	10.214
4	1.533	2.132	2.776	3.747	4.604	7.173
5	1.476	2.015	2.571	3.365	4.032	5.894
6	1.440	1.943	2.447	3.143	3.707	5.208
7	1.415	1.895	2.365	2.998	3.499	4.785
8	1.397	1.860	2.306	2.896	3.355	4.501
9	1.383	1.833	2.262	2.821	3.250	4.297
10	1.372	1.812	2.228	2.764	3.169	4.144
11	1.363	1.796	2.201	2.718	3.106	4.025
12	1.356	1.782	2.179	2.681	3.055	3.930
13	1.350	1.771	2.160	2.650	3.012	3.852
14	1.345	1.761	2.145	2.624	2.977	3.787
15	1.341	1.753	2.131	2.602	2.947	3.733
16	1.337	1.746	2.120	2.583	2.921	3.686
17	1.333	1.740	2.110	2.567	2.898	3.646
18	1.330	1.734	2.101	2.552	2.878	3.611
19	1.328	1.729	2.093	2.539	2.861	3.579
20	1.325	1.725	2.086	2.528	2.845	3.552
21	1.323	1.721	2.080	2.518	2.831	3.527
22	1.321	1.717	2.074	2.508	2.819	3.505
23	1.319	1.714	2.069	2.500	2.807	3.485
24	1.318	1.711	2.064	2.492	2.797	3.467
25	1.316	1.708	2.060	2.485	2.787	3.450
26	1.315	1.706	2.056	2.479	2.779	3.435
27	1.314	1.703	2.052	2.473	2.771	3.421
28	1.313	1.701	2.048	2.467	2.763	3.408
29	1.311	1.699	2.045	2.462	2.756	3.396
30	1.310	1.697	2.042	2.457	2.750	3.385
40	1.303	1.684	2.021	2.423	2.704	3.307
50	1.299	1.676	2.009	2.403	2.678	3.261
60	1.296	1.671	2.000	2.390	2.660	3.232
80	1.292	1.664	1.990	2.374	2.639	3.195
100	1.290	1.660	1.984	2.364	2.626	3.174
∞	1.282	1.645	1.960	2.326	2.576	3.091