Basic Statistics for Business and Economics Canadian 4th Edition Lind Test Bank

1.

award:
10.00
points

Which of the following is NOT a characteristic of ...
Which of the following is NOT a characteristic of the F distribution?

- ○ It is based on two sets of degrees of freedom
- ○ It is positively skewed.
- → ○ As the values of X increase, the F curve approaches the X-axis and eventually equals zero.
- ○ It is asymptotic.

Multiple Choice	Difficulty: Easy
Which of the following is NOT a characteristic of ...	Learning Objective: 1

2.

award:
10.00
points

i. One characteristic of the F distribution is tha...
i. One characteristic of the F distribution is that F cannot be negative.T2
ii. One characteristic of the F distribution is that computed F can only range between -1 and +1.F2
iii. The shape of the F distribution is positively skewed

- ○ (i), (ii) and (iii) are all correct statements
- ○ (i) and (ii) are correct statements, but not (iii).
- → ○ (i) and (iii) are correct statements but not (ii).
- ○ (ii) and (iii) are correct statements but not (i).
- ○ All statements are false

Multiple Choice	Difficulty: Hard
i. One characteristic of the F distribution is tha...	Learning Objective: 1

3.

award:
10.00
points

i. One characteristic of the F distribution is tha...
i. One characteristic of the F distribution is that F cannot be negative.
ii. The shape of the F distribution is determined by the degrees of freedom for the F-statistic, one for the numerator and one for the denominator.
iii. The F distribution's curve is positively skewed.

- → ○ (i), (ii) and (iii) are all correct statements
- ○ (i) and (ii) are correct statements, but not (iii).
- ○ (i) and (iii) are correct statements but not (ii).
- ○ (ii) and (iii) are correct statements but not (i).
- ○ All statements are false

Multiple Choice	Difficulty: Hard
i. One characteristic of the F distribution is tha...	Learning Objective: 1

4.

award:
10.00 points

i. One characteristic of the F distribution is tha...

i. One characteristic of the *F* distribution is that computed *F* can only range between -1 and +1.

ii. The shape of the *F* distribution is determined by the degrees of freedom for the *F*-statistic, one for the numerator and one for the denominator.

iii. The *F* distribution's curve is positively skewed.

- ○ (i), (ii) and (iii) are all correct statements
- ○ (i) and (ii) are correct statements, but not (iii).
- ○ (i) and (iii) are correct statements but not (ii).
- → ○ (ii) and (iii) are correct statements but not (i).
- ○ All statements are false

Multiple Choice	Difficulty: Hard
i. One characteristic of the F distribution is tha...	Learning Objective: 1

5.

award:
10.00 points

i. The F distribution is positively skewed and its...

i. The *F* distribution is positively skewed and its values may range from 0 to plus infinity.

ii. The *F* distribution's curve is positively skewed.

iii. There is one, unique *F* distribution for a F-statistic with 29 degrees of freedom in the numerator and 28 degrees of freedom in the denominator.

- → ○ (i), (ii) and (iii) are all correct statements
- ○ (i) and (ii) are correct statements, but not (iii).
- ○ (i) and (iii) are correct statements but not (ii).
- ○ (ii) and (iii) are correct statements but not (i).
- ○ All statements are false

Multiple Choice	Difficulty: Hard
i. The F distribution is positively skewed and its...	Learning Objective: 1

6.

award:
10.00 points

i. The shape of the F distribution is determined b...

i. The shape of the *F* distribution is determined by the degrees of freedom for the *F*-statistic, one for the numerator and one for the denominator.

ii. The *F* distribution's curve is positively skewed.

iii. Unlike Student's *t* distribution, there is only one *F* distribution.

- ○ (i), (ii) and (iii) are all correct statements
- → ○ (i) and (ii) are correct statements, but not (iii).
- ○ (i) and (iii) are correct statements but not (ii).
- ○ (ii) and (iii) are correct statements but not (i).
- ○ All statements are false

Multiple Choice	Difficulty: Hard
i. The shape of the F distribution is determined b...	Learning Objective: 1

7.

award:
10.00 points

i. The F distribution is positively skewed and its...

i. The *F* distribution is positively skewed and its values may range from 0 to plus infinity.

ii. The *F* distribution's curve is positively skewed

iii. Like Student's *t* distribution, a change in the degrees of freedom causes a change in the shape of the F distribution.

- → ○ (i), (ii) and (iii) are all correct statements
- ○ (i) and (ii) are correct statements, but not (iii).
- ○ (i) and (iii) are correct statements but not (ii).
- ○ (ii) and (iii) are correct statements but not (i).
- ○ All statements are false

Multiple Choice	Difficulty: Hard
i. The F distribution is positively skewed and its...	Learning Objective: 1

8.

award:
10.00
points

i. The test statistic used in ANOVA is Fii. The ca...

i. The test statistic used in ANOVA is F
ii. The calculated F value must be equal to or greater than zero (0)
iii. The shape of the F distribution is symmetrical

- ○ (i), (ii) and (iii) are all correct statements
- → ○ (i) and (ii) are correct statements, but not (iii).
- ○ (i) and (iii) are correct statements but not (ii).
- ○ (ii) and (iii) are correct statements but not (i).
- ○ All statements are false

Multiple Choice	Difficulty: Hard
i. The test statistic used in ANOVA is Fii. The ca...	Learning Objective: 1

9.

award:
10.00
points

i. The shape of the F distribution is determined b...

i. The shape of the F distribution is determined by the degrees of freedom for the F-statistic, one for the numerator and one for the denominator.
ii. Like Student's t distribution, a change in the degrees of freedom causes a change in the shape of the F distribution.
iii. The calculated F value must be equal to or greater than zero (0)

- → ○ (i), (ii) and (iii) are all correct statements
- ○ (i) and (ii) are correct statements, but not (iii).
- ○ (i) and (iii) are correct statements but not (ii).
- ○ (ii) and (iii) are correct statements but not (i).
- ○ All statements are false

Multiple Choice	Difficulty: Hard
i. The shape of the F distribution is determined b...	Learning Objective: 1

10.

award:
10.00
points

i. The F distribution is positively skewed and its...

i. The F distribution is positively skewed and its values may range from 0 to plus infinity.
ii. The F distribution's curve is positively symmetrical.
iii. Like Student's t distribution, a change in the degrees of freedom causes a change in the shape of the F distribution.

- ○ (i), (ii) and (iii) are all correct statements
- ○ (i) and (ii) are correct statements, but not (iii).
- → ○ (i) and (iii) are correct statements but not (ii).
- ○ (ii) and (iii) are correct statements but not (i).
- ○ All statements are false

Multiple Choice	Difficulty: Hard
i. The F distribution is positively skewed and its...	Learning Objective: 1

11.

award:
10.00
points

i. One characteristic of the F distribution is tha...

i. One characteristic of the F distribution is that computed F can only range between -1 and +1.
ii. The F distribution's curve is positively skewed.
iii. Like Student's t distribution, a change in the degrees of freedom causes a change in the shape of the F distribution.

- ○ (i), (ii) and (iii) are all correct statements
- ○ (i) and (ii) are correct statements, but not (iii).
- ○ (i) and (iii) are correct statements but not (ii).
- → ○ (ii) and (iii) are correct statements but not (i).
- ○ All statements are false

Multiple Choice	Difficulty: Hard
i. One characteristic of the F distribution is tha...	Learning Objective: 1

12.

i. The test statistic used in ANOVA is tii. The ca...

i. The test statistic used in ANOVA is t

ii. The calculated F value must be equal to or greater than one (1)

iii. The shape of the F distribution is symmetrical.

- ○ (i), (ii) and (iii) are all correct statements
- ○ (i) and (ii) are correct statements, but not (iii).
- ○ (i) and (iii) are correct statements but not (ii).
- ○ (ii) and (iii) are correct statements but not (i).
- →○ All statements are false

Multiple Choice	Difficulty: Hard
i. The test statistic used in ANOVA is tii. The ca...	Learning Objective: 1

13.

What distribution does the F distribution approach...

What distribution does the F distribution approach as the sample size increases?

- ○ Binomial
- →○ Normal
- ○ Poisson
- ○ Exponential
- ○ None of these is correct

Multiple Choice	Difficulty: Medium
What distribution does the F distribution approach...	Learning Objective: 1

14.

An F statistic is:

An F statistic is:

- ○ a ratio of two means.
- →○ a ratio of two variances.
- ○ the difference between three means.
- ○ a population parameter.

Multiple Choice	Difficulty: Easy
An F statistic is:	Learning Objective: 1

15.

Which statement is correct about the F distributio...

Which statement is correct about the F distribution?

- →○ Cannot be negative
- ○ Cannot be positive
- ○ Is the same as the t distribution
- ○ Is the same as the z distribution
- ○ None of these is correct

Multiple Choice	Difficulty: Medium
Which statement is correct about the F distributio...	Learning Objective: 1

16. award:
10.00
points

Which of the following are characteristics of the ...
Which of the following are characteristics of the F distribution?

- ○ There is a "family" of F distributions
- ○ The F distribution is continuous.
- ○ The F distribution cannot be negative.
- → ○ All of the above are characteristics of the F distribution.

Multiple Choice	Difficulty: Medium
Which of the following are characteristics of the ...	Learning Objective: 1

17. award:
10.00
points

i. If the computed value of F is 0.99 and the crit...
i. If the computed value of *F* is 0.99 and the critical value is 3.89, we would not reject the null hypothesis.
ii. When comparing two population variances we use the *F* distribution.
iii. A one way ANOVA is use to compare several treatment means.

- → ○ (i), (ii) and (iii) are all correct statements
- ○ (i) and (ii) are correct statements, but not (iii).
- ○ (i) and (iii) are correct statements but not (ii).
- ○ (ii) and (iii) are correct statements but not (i).
- ○ All statements are false

Multiple Choice	Difficulty: Hard
i. If the computed value of F is 0.99 and the crit...	Learning Objective: 2

18. award:
10.00
points

Two accounting professors decided to compare the v...
Two accounting professors decided to compare the variation of their grading procedures. To accomplish this they each graded the same 10 exams with the following results:

	Mean Grade	Standard Deviation
Professor 1	79.3	22.4
Professor 2	82.1	12.0

Using Excel to assist in the comparison, what test would be used?

- ○ ANOVA: Single Factor
- ○ ANOVA: Two-Factor with Replication
- ○ F-Test Two Sample for Variances
- ○ t-Test: Paired Two Sample for Means
- → ○ We need the raw data in order to use the F-test in Excel

Multiple Choice	Difficulty: Medium
Two accounting professors decided to compare the v...	Learning Objective: 2

19.

Two accounting professors decided to compare the v...

Two accounting professors decided to compare the variation of their grading procedures. To accomplish this they each graded the same 10 exams with the following results:

	Mean Grade	Standard Deviation
Professor 1	79.3	22.4
Professor 2	82.1	12.0

What is H_0?

→ ○ $\sigma^2_1 = \sigma^2_2$

○ $\sigma^2_1 \neq \sigma^2_2$

○ $\mu_1 = \mu_2$

○ $\mu_1 \neq \mu_2$

○ None of these statements are true

Multiple Choice	Difficulty: Easy
Two accounting professors decided to compare the v...	Learning Objective: 2

20.

Two accounting professors decided to compare the v...

Two accounting professors decided to compare the variation of their grading procedures. To accomplish this they each graded the same 10 exams with the following results:

	Mean Grade	Standard Deviation
Professor 1	79.3	22.4
Professor 2	82.1	12.0

What is H_1?

○ $\sigma^2_1 = \sigma^2_2$

→ ○ $\sigma^2_1 \neq \sigma^2_2$

○ $\mu_1 = \mu_2$

○ $\mu_1 \neq \mu_2$

○ None of these statements are true

Multiple Choice	Difficulty: Easy
Two accounting professors decided to compare the v...	Learning Objective: 2

21.

Two accounting professors decided to compare the v...

Two accounting professors decided to compare the variation of their grading procedures. To accomplish this they each graded the same 10 exams with the following results:

	Mean Grade	Standard Deviation
Professor 1	79.3	22.4
Professor 2	82.1	12.0

What are the degrees of freedom for the numerator of the F ratio?

○ 8

→ ○ 9

○ 10

○ 18

○ 20

Multiple Choice	Difficulty: Medium
Two accounting professors decided to compare the v...	Learning Objective: 2

22.

Two accounting professors decided to compare the v...

Two accounting professors decided to compare the variation of their grading procedures. To accomplish this they each graded the same 10 exams with the following results:

	Mean Grade	Standard Deviation
Professor 1	79.3	22.4
Professor 2	82.1	12.0

What are the degrees of freedom for the denominator of the *F* ratio?

- ○ 20
- ○ 18
- ○ 10
- →○ 9
- ○ 8

Multiple Choice	Difficulty: Medium
Two accounting professors decided to compare the v...	Learning Objective: 2

23.

Two accounting professors decided to compare the v...

Two accounting professors decided to compare the variation of their grading procedures. To accomplish this they each graded the same 10 exams with the following results:

	Mean Grade	Standard Deviation
Professor 1	79.3	22.4
Professor 2	82.1	12.0

What is the critical value of *F* at the 0.01 level of significance?

- ○ 5.85
- →○ 5.35
- ○ 6.51
- ○ 4.03
- ○ None of these statements are true

Multiple Choice	Difficulty: Medium
Two accounting professors decided to compare the v...	Learning Objective: 2

24.

Two accounting professors decided to compare the v...

Two accounting professors decided to compare the variation of their grading procedures. To accomplish this they each graded the same 10 exams with the following results:

	Mean Grade	Standard Deviation
Professor 1	79.3	22.4
Professor 2	82.1	12.0

What is the critical value of *F* at the 0.05 level of significance?

- ○ 5.85
- ○ 5.35
- →○ 3.18
- ○ 4.03
- ○ None of these statements are true

Multiple Choice	Difficulty: Medium
Two accounting professors decided to compare the v...	Learning Objective: 2

Two accounting professors decided to compare the v...
Two accounting professors decided to compare the variation of their grading procedures. To accomplish this they each graded the same 10 exams with the following results:

	Mean Grade	Standard Deviation
Professor 1	79.3	22.4
Professor 2	82.1	12.0

The calculated F ratio is:

→ ○ 3.484

○ 1.867

○ 3.18

○ 5.35

○ None of these statements are true

Multiple Choice   Difficulty: Hard

Two accounting professors decided to compare the v...   Learning Objective: 2

Two accounting professors decided to compare the v...
Two accounting professors decided to compare the variation of their grading procedures. To accomplish this they each graded the same 10 exams with the following results:

	Mean Grade	Standard Deviation
Professor 1	79.3	22.4
Professor 2	82.1	12.0

At the 1% level of significance, what is the decision?

○ Reject the null hypothesis and conclude the variance is different.

○ Fail to reject the null hypothesis and conclude the variance is different.

○ Reject the null hypothesis and conclude the variance is the same.

→ ○ Fail to reject the null hypothesis and conclude the variance is the same.

○ None of these statements are true

Multiple Choice   Difficulty: Hard

Two accounting professors decided to compare the v...   Learning Objective: 2

Two accounting professors decided to compare the v...
Two accounting professors decided to compare the variation of their grading procedures. To accomplish this they each graded the same 10 exams with the following results:

	Mean Grade	Standard Deviation
Professor 1	79.3	22.4
Professor 2	82.1	12.0

At the 5% level of significance, what is the decision?

→ ○ Reject the null hypothesis and conclude the variance is different.

○ Fail to reject the null hypothesis and conclude no significant difference in the variance.

○ Reject the null hypothesis and conclude the variance is the same.

○ Fail to reject the null hypothesis and conclude the variance is the same.

○ None of these statements are true

Multiple Choice   Difficulty: Hard

Two accounting professors decided to compare the v...   Learning Objective: 2

28.

Analysis of variance is used to:
Analysis of variance is used to:

- ◉ compare nominal data.
- ◉ compute *t* test.
- ◉ compare population proportion.
→ ◉ simultaneously compare several population means.
- ◉ None of these statements are true.

Multiple Choice	Difficulty: Medium
Analysis of variance is used to:	Learning Objective: 3

29.

i. The statistical technique used to test the equa...
i. The statistical technique used to test the equality of three or more population means is called analysis of variance (ANOVA)
ii. To employ ANOVA, the populations should have approximately equal standard deviations.
iii. To employ ANOVA, the populations being studied must be approximately normally distributed.

→ ◉ (i), (ii) and (iii) are all correct statements
- ◉ (i) and (ii) are correct statements, but not (iii).
- ◉ (i) and (iii) are correct statements but not (ii).
- ◉ (ii) and (iii) are correct statements but not (i).
- ◉ All statements are false

Multiple Choice	Difficulty: Hard
i. The statistical technique used to test the equa...	Learning Objective: 3

30.

i. The statistical technique used to test the equa...
i. The statistical technique used to test the equality of three or more population means is called analysis of variance (ANOVA)
ii. To employ ANOVA, the populations should have approximately equal standard deviations.
iii. The least number of sources of variation in ANOVA is two.

→ ◉ (i), (ii) and (iii) are all correct statements
- ◉ (i) and (ii) are correct statements, but not (iii).
- ◉ (i) and (iii) are correct statements but not (ii).
- ◉ (ii) and (iii) are correct statements but not (i).
- ◉ All statements are false

Multiple Choice	Difficulty: Hard
i. The statistical technique used to test the equa...	Learning Objective: 3

31.

i. The statistical technique used to test the equa...
i. The statistical technique used to test the equality of three or more population means is called analysis of variance (ANOVA)
ii. To employ ANOVA, the populations need not have equal standard deviations.
iii. To employ ANOVA, the populations being studied must be approximately normally distributed.

- ◉ (i), (ii) and (iii) are all correct statements
- ◉ (i) and (ii) are correct statements, but not (iii).
→ ◉ (i) and (iii) are correct statements but not (ii).
- ◉ (ii) and (iii) are correct statements but not (i).
- ◉ All statements are false

Multiple Choice	Difficulty: Hard
i. The statistical technique used to test the equa...	Learning Objective: 3

32.

award:
10.00 points

i. To employ ANOVA, the populations should have ap...

i. To employ ANOVA, the populations should have approximately equal standard deviations.
ii. To employ ANOVA, the populations being studied must be approximately normally distributed.
iii. A technique that is efficient when simultaneously comparing more than two population means is known as analysis of variance (ANOVA)

→ ○ (i), (ii) and (iii) are all correct statements

○ (i) and (ii) are correct statements, but not (iii).

○ (i) and (iii) are correct statements but not (ii).

○ (ii) and (iii) are correct statements but not (i).

○ All statements are false

Multiple Choice	Difficulty: Hard
i. To employ ANOVA, the populations should have ap...	Learning Objective: 3

33.

award:
10.00 points

i. To employ ANOVA, the populations need not have ...

i. To employ ANOVA, the populations need not have equal standard deviations.
ii. To employ ANOVA, the populations being studied need not be normally distributed.
iii. A technique that is efficient when simultaneously comparing more than two population means is known as analysis of deviation.

○ (i), (ii) and (iii) are all correct statements

○ (i) and (ii) are correct statements, but not (iii).

○ (i) and (iii) are correct statements but not (ii).

○ (ii) and (iii) are correct statements but not (i).

→ ○ All statements are false

Multiple Choice	Difficulty: Hard
i. To employ ANOVA, the populations need not have ...	Learning Objective: 3

34.

award:
10.00 points

i. To employ ANOVA, the populations being studied ...

i. To employ ANOVA, the populations being studied must be approximately normally distributed.
ii. A technique that is efficient when simultaneously comparing more than two population means is known as analysis of variance (ANOVA)
iii. The least number of sources of variation in ANOVA is two.

→ ○ (i), (ii) and (iii) are all correct statements

○ (i) and (ii) are correct statements, but not (iii).

○ (i) and (iii) are correct statements but not (ii).

○ (ii) and (iii) are correct statements but not (i).

○ All statements are false

Multiple Choice	Difficulty: Hard
i. To employ ANOVA, the populations being studied ...	Learning Objective: 3