Elementary Statistics	**Name:** _____
Study Guide 29	**Class:** _____
Due Date: _____	**Score:** _____

Your solutions must be consistent with class notes & resources.

Be Neat, Organized, and No Work $\Leftrightarrow$ No Points

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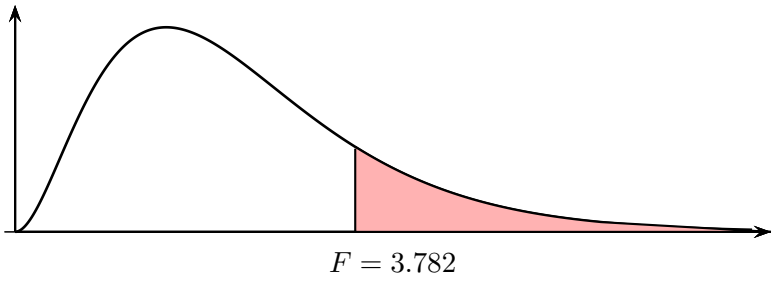
1. (2 points) Find the shaded area below using $Ndf = 11$ & $Ddf = 6$.



1. _____

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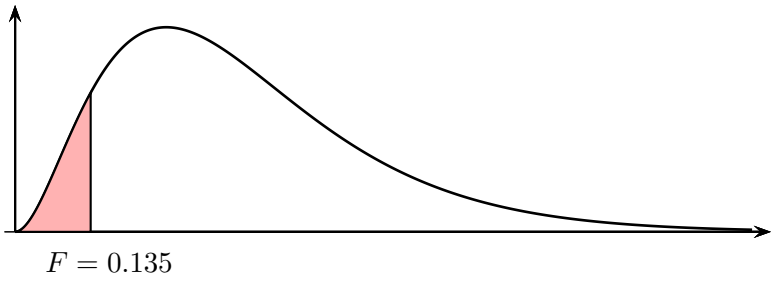
2. (2 points) Find the shaded area below using $Ndf = 9$ & $Ddf = 12$.



2. _____

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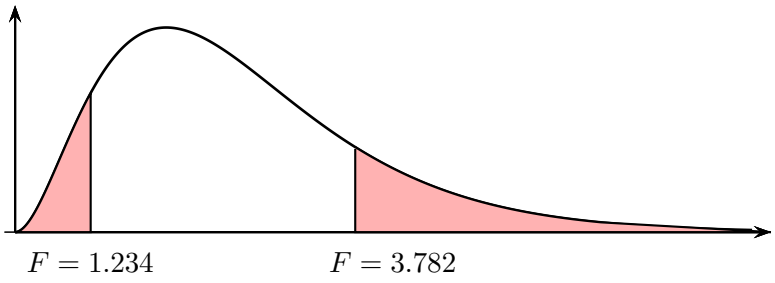
3. (3 points) Find the shaded area below using $Ndf = 8$ & $Ddf = 8$.



3. _____

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4. (3 points) When comparing equality of two population standard deviations, how do you determine which sample becomes sample 1 and then the degrees of freedom?

4. _____

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5. (1 point) When comparing two population standard deviations, what TI command do you use in order to find the CTS and P–Value?

5. _____

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6. (2 points) When testing two population standard deviations, give full TI command in order to find the P–Value when CTS, Ndf, and Ddf are given?
Drawing with complete TI command required.

(a) (2 points) for L.T.T.

(a) _____

(b) (2 points) for R.T.T.

(b) _____

(c) (2 points) for T.T.T.

(c) _____

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7. (2 points) When comparing two population standard deviations, what formula do you use in order to find the CTS?

7. _____

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8. (4 points) Given: $n_1 = 8, n_2 = 10, C.T.S.\ F = 3.525$**, Find the corresponding P-Value for a T.T.T. working with two population standard deviations. Drawing with complete TI command required.**

8. _____

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9. Given: $n_1 = 6, s_1 = 25, n_2 = 10, s_2 = 10, H_1 : \sigma_1 \neq \sigma_2, \alpha = 0.1$ **, claim:** H_1

(a) (2 points) Clearly state H_0 and H_1, and identify the type of test.

H_0 : _____

H_1 : _____

(b) (2 points) Find the computed test statistic and the P-value.

C.T.S. : _____ **P-Value :** _____

(c) (2 points) Apply the <u>P-Value Method</u> to test the claim, and use non-statistical terminology to express your final conclusion about the claim.

(c) _____

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10. Given: $n_1 = 12, s_1 = 20, n_2 = 8, s_2 = 10, H_1 : \sigma_1 > \sigma_2$ **, claim:** H_1

(a) (2 points) Clearly state H_0 and H_1, and identify the type of test.

H_0 : _____

H_1 : _____

(b) (3 points) Find the computed test statistic and the P-value.

C.T.S. : _____ **P-Value :** _____

(c) (2 points) Apply the <u>P-Value Method</u> to test the claim, and use non-statistical terminology to express your final conclusion about the claim.

(c) _____

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11. A mathematics assessment test was given to students in two local high schools. The table below shows the results from independent samples taken from these two high schools.

High School A							High School B						
67	86	70	75	72	78	63	52	75	78	73	88	91	100
69	75	98	75	80			75	73	70	74	90	85	

(a) (4 points) Find the standard deviation for both groups. Round your answers to whole numbers, correctly choose which high school becomes sample 1, then complete the following table.

High School	High School
$n_1 =$	$n_2 =$
$s_1 =$	$s_2 =$

Test the claim that there is no difference between two population standard deviations between these two cities by using the data in the table above.

(b) (2 points) Clearly state H_0 , H_1, identify the claim and type of test.

H_0 : _____

H_1 : _____

(c) (2 points) Find the computed test statistic and the P-value.

C.T.S. : _____ **P-Value :** _____

(d) (2 points) Apply the <u>P-Value Method</u> to test the claim, and use non-statistical terminology to state your final conclusion about the claim.

(d) _____

(e) (2 points) Choose values for the level of significance α from this list $\{0.2, 0.3, 0.4, 0.5\}$ that reverses your conclusion.

(e) _____

It is important to value the lessons of failure.