

NAME(S) _____

Virtual Lab Activity: The Student t and F Distributions

[The Virtual Laboratory for Probability and Statistics was developed by Dr. Kyle Siegrist at UAH.]

Go to www.math.uah.edu/stat/

Select

5. Special Distributions

5. The Student t Distribution

Note: In the quantile applet, the “quantile” refers to the value of the random variable from the specified distribution. The “prob” is the cumulative probability as shown in the graph. Just like in the text table, the cumulative probability can be used to find the probability in any interval.

Read the lesson.

5. Use the quantile applet and the Student t distribution to complete the table.

N	median	Q ₁	Q ₃	IQR=Q ₃ -Q ₁
2				
5				
10				
20				

Select the Normal distribution and determine IQR = _____

When is the Student t distribution most similar to the Normal distribution?

At the end of the lesson, select [6] to proceed to the lesson on the F distribution.

4. Use the quantile applet and the F distribution to complete the table. The numerator degrees of freedom are given by “m” and the denominator degrees of freedom are given by “n.”

m	N	median	Q ₁	Q ₃	IQR=Q ₃ -Q ₁
5	5				
5	10				
10	5				
10	10				

Does a Normal approximation to the F distribution make sense? Why or why not?