



Problem 1 – Characteristics of the *F* Distribution

1.4–1.5: How does the *F* distribution compare to other distributions you have studied?

2.1: Does interchanging the degrees of freedom lead to a new distribution?

Problem 2 – Probabilities and Percentiles

2.2: What must be true if *F*, the ratio of the variances, is close to 1? Why?

3.2: Find $P(F < 1)$ for $F(15, 25)$. Use the **Integral** tool on the graph to confirm your answer.

3.3-3.4: Find the *F* value at the 90th percentile. Use the graph to check your answer.

Problem 3 – Critical Values for an *F* Distribution

4.1–4.2: For $F(6, 10)$, find the critical values that would be used to construct a 95% confidence interval. Check your critical values on the graph.

4.3-4.4: For $F(12, 19)$ find F_L and F_R at the 99% level.

Problem 4 – Constructing a Confidence Interval

5.3: Construct a 95% confidence interval for the ratio of the variances.

5.4: Is there a significant difference in the variances of the weights of the items produced by both machines? Explain.