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Practice: Recognizing Shapes in Normal Quantile Plots

In this practice, you use histograms and normal quantile plots to explore the shapes of four distributions.

1. Open the file **Four Distributions.jmp**. This data set has four variables. Each variable follows a different distribution.
2. In the top left corner of the data table is a saved script, **Quantile Plot**. Click the green triangle to run this script. The script creates normal quantile plots for the four variables. Using only the normal quantile plots, answer the following questions:

    a. Which variable is right-skewed?

    b. Which variable appears to be the most normally distributed?

    c. Which variable doesn't look skewed, but doesn't quite look normal? What might cause this pattern?

    d. Which variable is left-skewed?

    If needed, you can add histograms. To do this, click on the red triangle for a variable and select **Histogram Options** and then **Histogram**.

    a. **Variable 2** is right-skewed.

    b. **Variable 1** looks approximately normally distributed.

    c. **Variable 4** has an unusual pattern. Looking at the histogram, this distribution might be bimodal. Bimodal data are often a mixture of two distributions.

    d. **Variable 3** is left-skewed.

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