Assessing Normality

This page documents some ways to assess normality for a continuous (quantitative) variable.

1. From an open JMP® data table, select Analyze > Distribution.
2. Select one or more continuous variables from Select Columns and click Y, Columns.
3. Click OK to generate a histogram and descriptive statistics (a horizontal layout is shown below).

Normal Quantile Plot

Click on the red triangle for the variable (Weight, in this example), and select Normal Quantile Plot.

If the data more or less follow a straight line (fat pen test), we can conclude that the data are reasonably approximated by a normal distribution.

For this example, we would conclude the distribution is approximately normal.

Fitting a Normal Distribution

1. Select Continuous Fit > Normal from the lower red triangle.
2. In the resulting output, click on the red triangle for Fitted Normal and select Goodness of Fit.

Interpretation (using a significance level of 0.05):

- Prob<W is the p-value for this test.
- Our p-value is 0.5681.
- A p-value less than 0.05 would indicate that the underlying distribution is not normal.
- We do not have sufficient evidence to conclude that the underlying distribution is not normally distributed.