Demo: Creating Run Charts (Line Graphs) with Graph Builder

In this video, we show how to create run charts for the Impurity data using Graph Builder. We use run charts, or line graphs, to study the behavior of a characteristic over time.

First, we select Graph Builder from the Graph menu.

We drag Impurity to the Y zone, and then drag Batch to the X zone. Here, the data are sorted in batch order, and the batches were produced sequentially over time. JMP creates a dot plot of Impurity over time.

We click the smoother icon to remove the smoother. Then, to add a line to connect the points, we drag the line icon and drop it on top of the graph.

You can see that the points seem to bounce around randomly, with some low values at around 3 and a couple of high values at around 10.

You can add variables to the run chart. For example, we add a run chart for Catalyst Conc by dragging Catalyst Conc below Impurity on the Y axis.

You can see that the observations with low values of Catalyst Conc tend to have low values of Impurity.

Let's remove this second run chart.

There are 100 observations in this data set, so it's hard to see whether there are any patterns or trends over time. The data are stored in order of Day, with 10 observations per day. You can group the values in the run chart by Day.

To do this, we drag Day on top of Batch. This replaces Batch with Day and updates the graph. You can see that the spread of the points within a day is pretty wide, and that the average from day to day hovers at just over 6. The means from day to day observations seem to randomly vary around this value.

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