## **How to Handle Potential Curvature Issues During Optimization** Run 2<sup>k</sup> Factorial DOE How many 2 or more None continuous X's in the DOE? Only 1 In this complex scenario involving In this simple case, we can check for curvature All Discrete X's, so no by running additional trials at settings (levels) several continuous X's, we can curvature issues to the middle of, and outside of, our original +1 & check for curvature by asking our worry about. BB/MBB to assist us in adding -1 DOE settings (for the continuous X only). OK to use the transfer "Center Points" to our DOE matrix function (equation With only one continuous X, we can analyze based on the DOE (for the continuous X only). these results with Simple Linear Regression. coefficients). Curvature Detected? Curvature Detected? No Yes No Yes OK to use the original Need BB/MBB to assist Use "Linear" button Use "Quadratic" button transfer function with developing a within Minitab's within Minitab's (equation) based on "Response Surface "Stat>Regression> "Stat>Regression> **Fitted Line Plot**" **Fitted Line Plot**" the DOE coefficients. DOE" design