

Math 370

Chapter 3: Model Fitting

We have three possible tasks when analyzing a collection of data points:

1. Fitting a selected model type or types to the data. (Model Fitting)
2. Choosing the most appropriate model from competing types that have been fitted. (Model Fitting)
3. Making predictions from the collected data. (Interpolation)

Sources of Error in the Modeling Process

1. Formulation error (results from ignoring variables or over-simplifying)
2. Truncation error (results from approximations such as power series for functions)
3. Round-off error (results from using finite digit machines)
4. Measurement error (results from imprecision in the data collection)