What **assumptions** are you making?

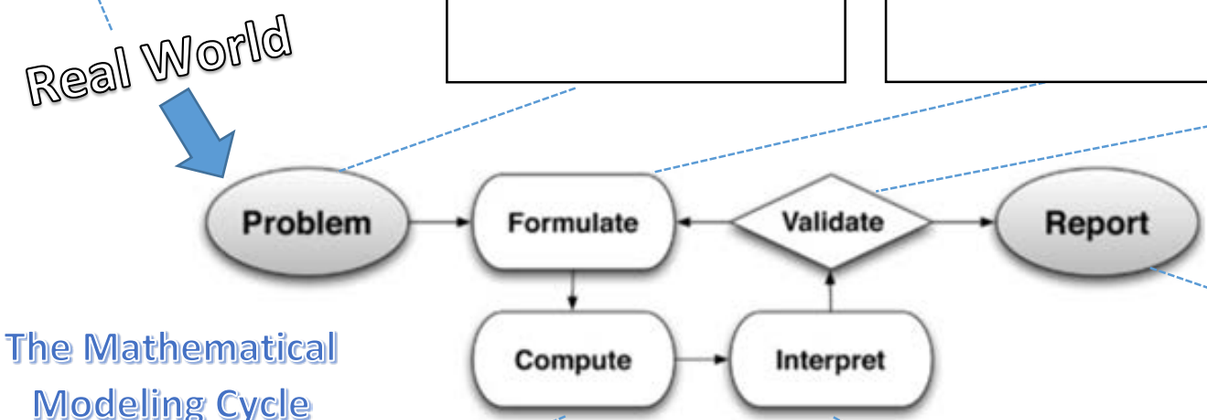
What **decisions** did you make?

Real World - What aspect of the real world are you trying to model? (What is the "why" or "how" question you are trying to answer?)

Problem - Identifying variables in the situation and selecting those that represent essential features

Formulate – formulating a model by creating and selecting geometric, graphical, tabular, algebraic, or statistical representations that describe the relationships between the variables

Validate – validating the conclusions by comparing them with the situation



The Mathematical Modeling Cycle

~~Compute~~ Analyze – analyzing and performing operations on these relationships to draw conclusions

Interpret – interpreting the results of the mathematics in terms of the original situation

Report – reporting on the conclusions and the reasoning behind them.

Choices, assumptions, and approximations are present throughout this cycle!