# Model Order Selection. In-class Exercise 3

EL-GY 6143 Intro Machine Learning. Prof. Sundeep Rangan

## Question

A teacher tries to model the score of a child on a test as follows:

Below are three possible shortcomings of the model. For each shortcoming, indicate whether it would lead to (i) High irreducible error, (ii) High bias error or (iii) High variance error

1. The relation between test score and hours studied is not linear. After some amount of studying, the students test score will no longer improve.
2. The model should also include the age of the child.
3. The model was fit with data from one class with only 15 children.