1.1 Similarities: Goal and using same basic programmatic building blocks. The goal is to have a predictable and efficient product, and the examples of building blocks would be performance, scope, and cost.
Differences: In the Waterfall development project, each of these represents a distinct stage of software development, and the degree of completion determines the direction of next stage. However, Agile is an iterative, and team-based approach of the development. It would be hard to constantly looks back at long-fixed requirements for Waterfall, because the requirements always change 25%-50%

1.2 Because most products satisfy universal process: inception, Elaboration, Construction, Transition, especially the last two points. No project is willing to take high risks, and Beta testing is an opportunity for real users to use the product in a production environment, with the goal of finding bugs or issues that can be fixed before the general release. And I do not think the model proposed by Royce is compatible, because it cannot satisfy Construction, which is iterative implementation of the remaining lower risk. If developers focus on this stage, the next stage will never happen, severely affecting the team's progress.

2. Responsibility
Data model
Parallel
Use case
Entity

3.1 Long Parameter List and Large Class
Encapsulation
For register, we only need the student ID and class ID, then we can add or drop the student, and age and height do not matter. And register will only add students rather than dropping, too many responsibilities.

3.2 Long function and Primitive Obsession
Modularity and Abstraction
Refactoring Long function: Divide "calculateEverything" into different methods, then one thing does not depend on other.
Refactoring Primitive Obsession: To use abstractions to hide them.

3.3 Primitive Obsession
Abstraction: Class name is not generic.
Encapsulation: Variables are Public.
Refactoring steps: EventSchedule should be Schedule, because schedule is generic, then it can be reused. And Variables should be Private.