Chapter 2 class group assignment

1. Imagine you are on the governing body for the Olympics. You have to decide on the rules for what constitutes a false start for the 100m sprint. Provide a detailed rationale for the timing of the false start. Bear in mind the notion of fractionated reaction time, of the sound of the gun traveling to the sprinter, and so on. List as many things as you can think of that has to happen between the gun going off and the person getting off the blocks, and then come to a decision as to what would fairly constitute a false start.

2. Imagine you have a dartboard, and are concerned with your throws’ error above and below the bulls eye. Your first throw hits 3 inches above the bulls eye. Where should the next throw hit to minimize
   a. Constant error?
   b. Variable error?
   c. Absolute error?

3. Can absolute error ever be less than constant error? Equal to? Greater than?

4. The following two diagrams depict a person taking a free throw in basketball. Each shows the same throw, but in different ways. The first shows the elbow and knee angles relative to time, and the second shows them relative to each other. **Your task is to imagine what this person’s three-point shot would look like, and sketch it on both charts (the purpose of this is just to get an idea of how each of the charts works, in terms of displaying data).** Both joint angles are taken so that larger angles imply extension of the joint (straightening) while smaller measures imply flexing (bending).
Figure 1: Position-time graph for elbow, shoulder and knee joint angles during a basketball free throw (from Satern & Keller-McNulty, 1992)

![Position-time graph for elbow, shoulder and knee joint angles during a basketball free throw (from Satern & Keller-McNulty, 1992)](image)

Figure 2: Angle-Angle diagram for same shot

![Angle-Angle diagram for same shot](image)