Problem Set 2: Kinematics in One and Two Dimensions
Design Engineering Challenge: "The Big Dig" 2.007 Contest
Scoring Strategies: Travel Times to Scoring Zones

The Spring 2004 contest table ("The Big Dig", see http://pergatory.mit.edu/2.007) has several ways to score, each of which requires your machine to drive across the table.

1. Assuming your machine can accelerate at 0.25g, state your assumptions and evaluate what is the time it takes to get to:
    a. The rotating ball-laden platter
    b. The mass-scoring bins
    c. The rotating paddle stations
    d. The time-stop buttons
    e. The tunnels
2. Consider the scoring potentials, what strategy do you think will be most likely to win:
    a. Move fast, score once, and block your opponent
    b. Move fast, score a lot and ignore/dodge your opponent
    c. Move as fast as possible with as much mass as possible to score big initially and then be free to score more, or go after your opponent
    d. Can you think of another effective strategy?
3. For each strategy, how would it compete if faced by one of the other strategies?