1. Consumer report often tests the acceleration and braking ability of cars to determine their performance characteristics. If a certain car can attain 60mph in 4.1 seconds and then come to rest without sliding in 2.3 sec how far has the car gone?

2. The hoop is 10 ft off of the ground and in general players need to jump 1 meter into the air. how long is the hang time in this case? How fast must they leave the ground in order to make this jump? How much of this time are they in the upper half of their trip and how much time are they in the lower half?

3. A man leaning on a balcony falls backward off the balcony. He is on the 8th floor and lands on a shed that is even with the second floor. the shed made out of tin compresses 1.4 meters while bringing him to rest. how fast was he going when he struck the shed assuming that each story was 3 meters tall. What acceleration did he endure being brought to rest?

4. A driver travelling 25m/s attempts to overtake a car and increases seed by acceleration at 5.5 m/s2 over a distance of 55 meters. how long did it take to increase speed and how fast was the car going at the end of the interval?

5. Assuming that in the above problem, both cars are even one in each lane at the point when the passing car reaches its max speed. How far will the passing car have to travel in order to safely merge back into trafic? assume he cannot merge ntil he clrears the car by 6 meters and assume that both cars are 6 meters long. How long was he in the lane of the opposing traffic? This is not an ccelerated motion problem.