Assignment

1. A bullet is shot at initial of velocity *40 m/s*, and elevation angle of 60^0 from a flat ground, air friction in neglected and gravitational acceleration *g = 10 m/s²*.
   Determine:

   a. The time needed by the bullet to reach the highest point H
   b. The maximum height reached by the bullet
   c. The greatest distance reached by the bullet.

2. An object is thrown at initial of velocity of 20 m/s from point A to the ground with elevation angle 30^0. If gravitational acceleration g = 10 m/s² and air friction is neglected, determine:
   a. The initial velocity vector
   b. The object velocity vector after 0,5 s
   c. The object position vector after 0,5 s

3. A ball is thrown horizontally at initial velocity of 4 m/s from a place 20 m above a plain ground. Air friction is neglected, g = 10 m/s². Determine the time required by the ball to fall to the ground, and where it lands measured from the base of where it was thrown to the ground.