Projectile Motion

Student's Name

Instructor's Name

Course

Institution

Due Date

Preliminary questions

1. How does the initial velocity of a projectile affect the distance which it can cover?

   Does the acceleration of the projectile change while in air or it remains constant?

2. If I launch a projectile towards a wall, will there be a change in velocity when moving in the reverse direction?

   Does a projectile move in the same straight line after bouncing from a wall or it changes the direction?

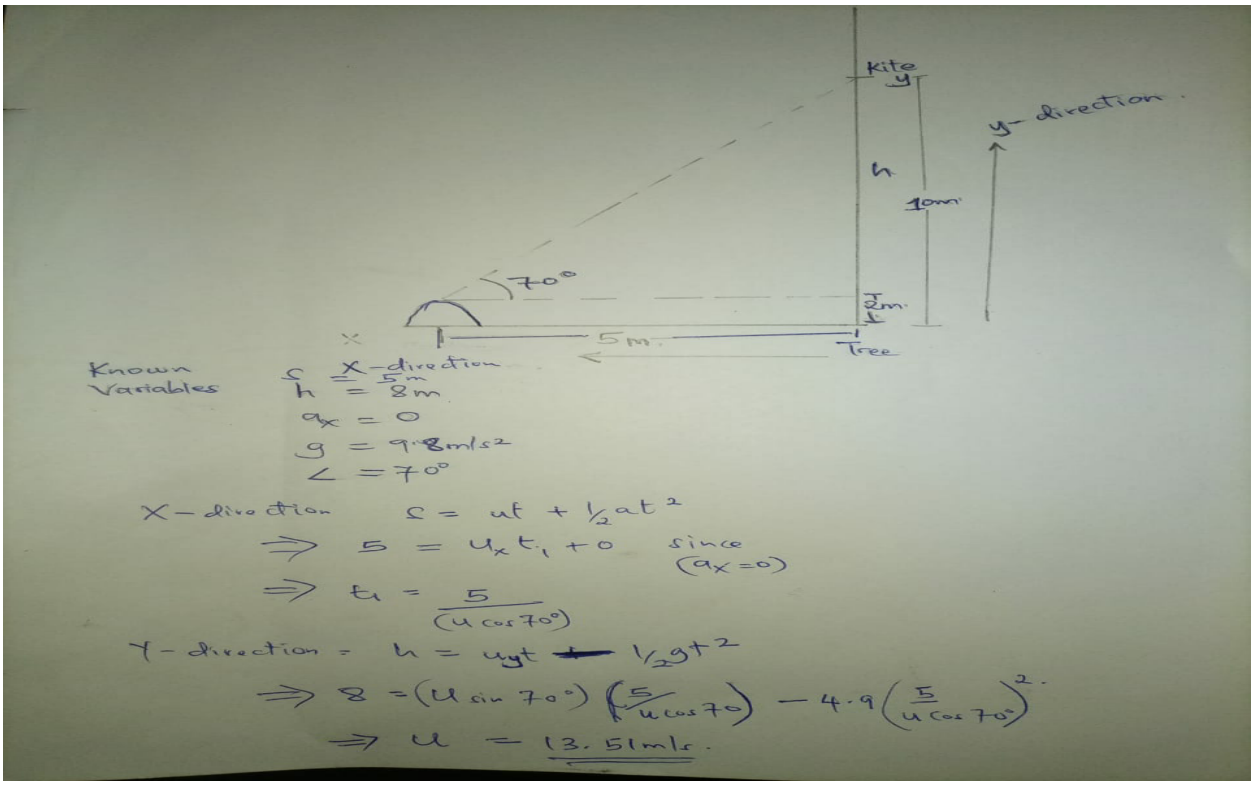
   Is there a relationship between the mass of a projectile and its acceleration?

3. Exercise 3.13 a car comes to a bridge during a storm and finds the bridge washed out. The driver must get to the other side, so he decides to try leaping it with his car. The side the car is on is 22.44mm above the river, while the opposite side is mere 1.6mm above the river. The river itself is a raging torrent 57mm wide.

   ### Problem was part B

   Calculating is the speed of the car just before it lands safely on the other side?

Sample test problem

4. 

Answer

The stone when thrown at 70^0 along the horizontal line at a speed would reach y= 8m from the point, n=5m at the time of hitting the kite.

X-direction expression $s=ut +1/2at^2$

$5= u_x t_1 +0$ since $(a_x =0)$

$T_1 \quad =5/(u \cos 70^o)$

Y-direction expression $h= u_y t-1/2gt^2$

$8= u \sin 70^o [5/(u \cos 70^o)] - 4.9*[5/(u \cos 70^o)]$

U= 13.51m/s

5. Yes
6. Yes

7. Yes
8. Yes
9. Yes
10. Yes

Reflection

11. I will participate in discussion groups.

    I will revise the questions in the course textbook.

    I will look for more questions from other reference books for practice purposes.