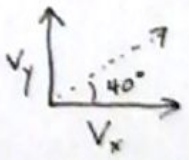
Name:

Tiger Woods hits a golf ball off the ground at 40° and a speed of 50 m/s. Use 9.8 m/s^2 = g.

1.) 

Find the V_x and V_y components of initial velocity.

2.) How long will the ball spend in the air?

3.) How far will the ball travel horizontally?

4.) How high did the ball travel?

5.) If there is a wall of trees 20 meters high between Tiger and the hole. The wall of trees is 25 meters away from Tiger. Will the ball go over the wall of trees. Why or why not?

6.) If the difference in height between Tiger's initial position and the hole is 10 meters, what would the horizontal distance traveled by the ball need to be for a hole in one?

Answer this on the next page.

6.)

7.) An object is launched and returns to the ground on a planet where 'g' is unkown. One second after launch the vertical velocity is 19 m/s and horizontal velocity is 18 m/s. Two seconds after launch vertical velocity is 14 m/s. What is 'g'?

8.) What is V_x at 4 seconds?

9.) What are V_x and V_y a $t = 0$ seconds?

10.) What is the initial launch angle θ?