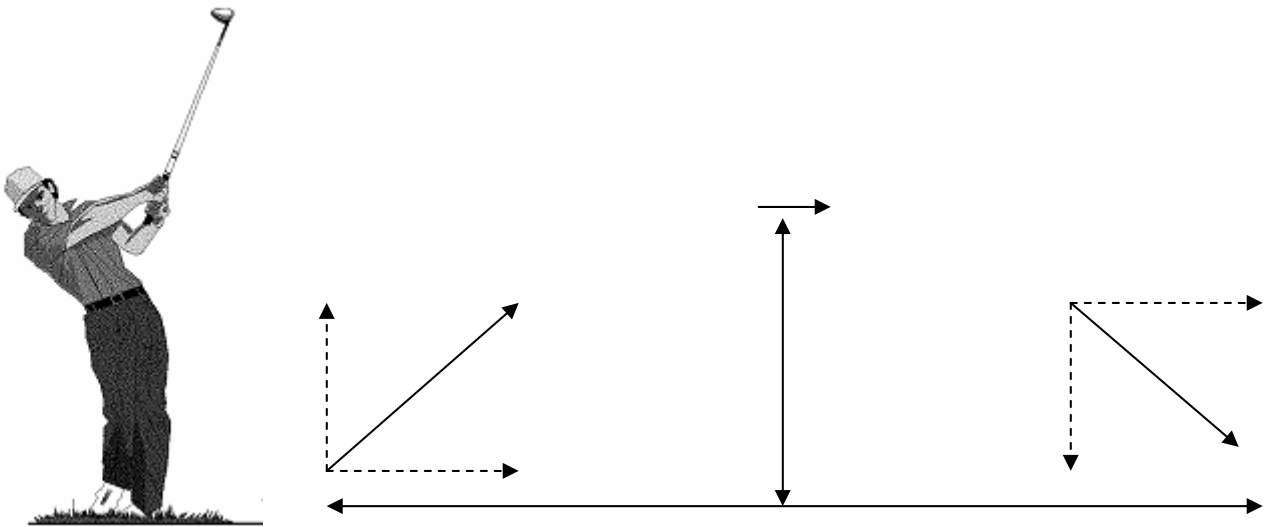


## Chapter 3: Projectile Motion Practice worksheet #1

**Directions:** Answer each of the following questions and show all work.

1. A golfer strikes a golf ball with an initial velocity of 45 m/s at an angle of  $40^\circ$  to the horizon.

**Complete the diagram below by labeling all vectors**



- Calculate the initial x velocity
- Calculate the initial y velocity
- What is the balls velocity just before it strikes the ground?
- What is the y velocity at the apex of the ball's motion?
- Calculate the total time the ball will be in the air
- Calculate the maximum range of the ball (how far does it go?)
- Calculate the maximum height reached by the ball?

