

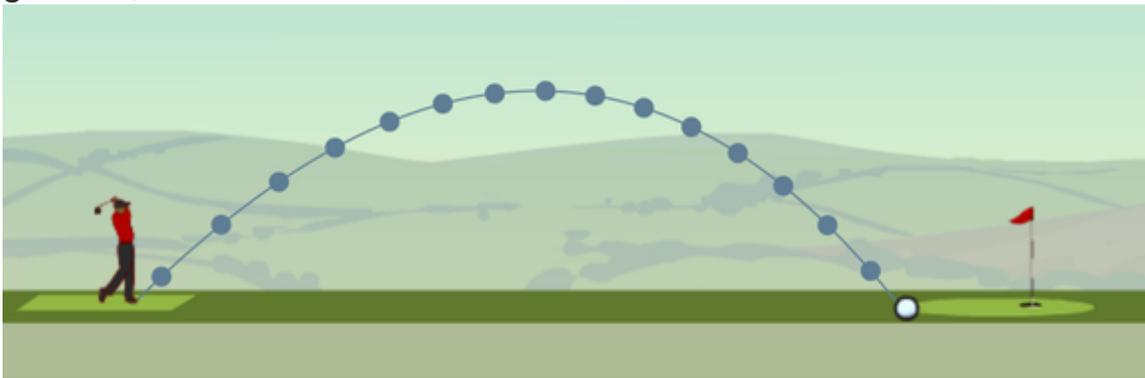
Projectile/ HW#11

Name: \_\_\_\_\_

1. The golf ball below has reached the top of its trajectory in the time shown. What will the total hang time be when the ball hits the ground? Assume no air resistance or spin.



2. The golfer shown below has hit the ball with the initial velocity and launch angle shown. What was the initial horizontal velocity of the golf ball,  $v_x$ ?



3. A cannon shoots a ball with an initial velocity of 152 m/s and a launch angle of  $62^\circ$ . The gravitational acceleration is  $9.8 \text{ m/s}^2$ . Assuming no air resistance, how long will the cannonball stay in the air?