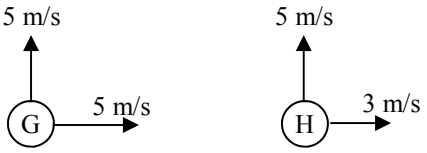
A-Day: Due Fri., Oct 3 (Assigned: 10/1)
B-Day: Due Mon., Oct 6 (Assigned: 10/2)

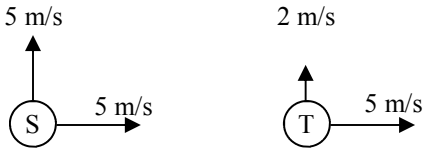
2008 PreAP Projectiles 2

1. Use projectiles G and H above to answer the following:
   A. Which one will hit the ground first?
   B. Which one is has a faster Vx?
   C. Which one goes farther?



---

2. Use projectiles S and T at the right to answer the following:
   A. Which one is in the air for the longest time?
   B. Which one hits the ground first?
   C. Which one lands farther away?
   D. Which one goes higher up in the air?

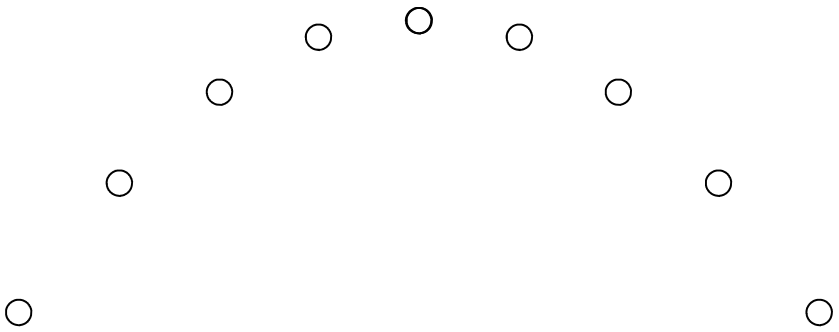


3. A projectile is launched moving 120 m/s at an angle of 80º from the ground to the ground.
   A. Using the notes, figure out the range of the projectile.

   B. How high up does the projectile rise?

4. A projectile is launched horizontally going 30 m/s from 15 m above the ground.
   A. What is its y-direction acceleration?
   B. What is its x-direction acceleration?
   C. What direction is it launched? (What is θ?)
   D. What is Vxi (the initial x velocity)?
   E. What is Vyi?
   F. What is Δy?
   G. Find how long it took the projectile to hit the ground.

   H. How far away did the projectile land (range)?



5. The circles on the diagram at the left shows the path of a projectile that is launched from the ground to the ground. On the diagram draw x-velocity and y-velocity vectors at each point on the graph.

6. A projectile is shot into the air from the ground. It lands on the ground 150 m away after being in the air for 20 seconds.
   A. How long did it take the projectile to reach the very top of its path?
   B. What is the projectile's y velocity at the top?
   C. Using this information, find Vyi for the projectile when it was launched.

   D. Since you how long it took to go 150 m, find Vx.

   E. Using Vx and Vy, find the direction and velocity it was shot.