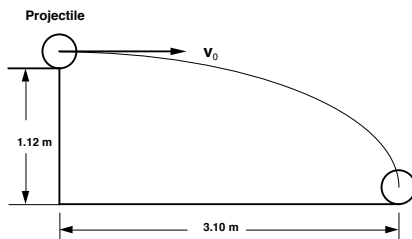


**PHYS 221**  
**Experiment 4 — Projectile motion**  
**Prelab**

1. What is the objective of this experiment? (1 pt.)
2. What is projectile motion? (1 pt.)
3. Find the **initial** velocity of the ball in the figure below. Remember that velocity is distance divided by time; See step 3 of procedure. Show all work. (2pts.).



4. For a ball shot with an initial speed of 6.0 m/s at a  $30^\circ$  inclination, find  $v_{0x}$  and  $v_{0y}$ . Show all work. (2 pt.)
5. Solve the following relationship for  $t$ .  
 $0 = 0.847 + 5.71 \sin 13^\circ t - \frac{1}{2} (9.8) t^2$ ; Show all work. (2 pts.)
6. Summarize the procedure. (2 pts.)