

## Physics 40 Projectile Motion Project

Objective: Solve and explain a projectile motion problem

For this project I am asking you to choose a projectile motion problem from the choices on the next page. Please solve this problem and create an accompanying “how to” video explanation. You may use a screen capture software (try screencast-o-matic), you may film your piece of paper, or you may use any other media of your choice but your project must include:

1. Audible narration of your solution to the problem.
2. Visual display of your solution to the problem.

**An example of a good project will be posted on the wikispace. View it before you start.**

### RUBRIC

	5	3	1	Points received
Narration	Student clearly and audibly explains every step they took to solve the problem	Student explains most steps/most steps are audible	Student explains few steps/few steps are audible	X2
Visual	Student clearly shows every step they took to solve the problem	Student shows most steps they took to solve the problem	Student shows few steps they took to solve the problem	X2

Total: \_\_\_\_\_/40

### Problems to choose from:

1. A golf player strikes a ball on the ground, giving it an initial velocity of 50m/s at an angle of  $34^\circ$  above the horizontal.
  - a. What is the maximum height the ball achieves? [39.88m]
  - b. How far does the ball travel? [263.5m]
  
2. A cannon is fired at  $15^\circ$  above the ground at 25m/s
  - a. How far away does it hit the ground? [31.89m]
  - b. What is its maximum height? [2.14m]
  
3. A potato cannon launches with an initial velocity of 40m/s at an angle of 70 degrees above the horizontal.
  - a. What is the maximum height the potato attains? [72.08m]
  - b. How far does from the cannon does it travel? [104.95m]
  
4. A football is thrown from the ground with an initial velocity of 15m/s at an angle of 35 degrees
  - a. What is the maximum height the football attains? [3.78m]
  - b. How far does the football travel? [21.57m]