



Video Analysis – Projectile Motion– Prelab Quiz

This pre-lab quiz is meant to familiarize you with the video analysis capabilities of Logger Pro.

INSTRUCTIONS

1. Open Logger Pro
2. Open the file: **File** > **Open** > **Sample Movies** > **Basketball Shot** > **Basketball Shot.cmbl**.
3. Follow the instructions in the file to analyze the motion of the ball while it is traveling like a projectile.
4. Fit both the x and y -axis data with models using **Analyze** > **Curve Fit...**.
5. Answer the following questions.

QUESTIONS

Be sure to show all of your work so that partial credit can be given.

1. **[2 points:]** What equation did you use to model the motion in the x -axis? What are the fit parameters and uncertainty?
2. **[2 points:]** What equation did you use to model the motion in the y -axis? What are the fit parameters and uncertainty?
3. **[2 points:]** What is the initial velocity of the ball when it leaves the shooter's hands?
4. **[2 points:]** What is the angle at which the ball is shot?
5. **[2 points:]** How far, in the horizontal direction, does the ball travel after leaving the shooter's hands before hitting the floor?