

AP Physics Lab

Lab 3-A: *Velocity of a Dart Gun* (2 Dimensions)

Equipment:

- dart gun & corresponding dart
- meter stick or 2-meter stick

Purpose:

- Calculate the initial velocity of a dart, using 2 dimensional kinematics equations.

Procedures:

- Obtain the same dart gun and dart used in Lab 2-A.
- Shoot the dart with an initial horizontal velocity off the edge of a lab table or cabinet.

Report:

1. Draw a diagram showing all measurements taken of the flight of the dart.
2. Calculate the initial velocity of the dart.
3. Calculate the overall final velocity of the dart.
4. Compare the initial velocity to that obtained in Lab 2-A. Which value do you believe to be more accurate? Why?