1. Describe the proportionality between the variables in each graph.
2. Prove to yourself the best-fit equations "y" and "x" variables match the appropriate variables in the equations you used.
3. Determine the vertical height the ball has dropped after 2.5 s.
4. What is the angle of inclination of the hill?
5. What is the significance of the slope of the Speed vs. Time graph?
6. What is the significance of the slope of the Distance vs. Time Squared graph?
7. Reconsider this scenario, with the initial velocity changed to 10 m/s. Explain what effect, if any, this will have on the following aspects of the graphs:
    a. slope
    b. y-intercept
    c. shape of the curve
8. What is the significance of the y-intercept of the Speed vs. Time graph?
9. Often, we find that the "area under a curve" of a best-fit provides meaningful information about the situation being studied.
    a. On your Speed vs. Time graph, draw a line from the best-fit line at t = 4 down to the x-axis. This should create a triangle.
        i. Calculate the area of the triangle.
        ii. What is the significance of the area of the triangle?
    b. Repeat part “a” for an area created from t = 5 s to t = 7.5 s.
    c. On your Distance vs. Time graph, draw a line from the best-fit at t = 4 down to the x-axis. This will create a non-polygon shape.
        i. Determine a method to estimate the area of this figure. Carry out your calculation.
        ii. What is the significance of the area of this shape?
    d. Repeat part “c” for an area created from t = 5 s to t = 7.5 s.