Evaluating LoggerPro graphs: E_{GRAV} and E_K

Instructions: Use photo, graphs and blank pie charts that are provided to complete the activity. **You must read the h_i, h_f, v_i and v_f from the graphs provided.** This information is the key information that you need to do an analysis of the energy transformation that occurs.

1st

Drawing (or Photo) of the ball drop

1. Label starting height as 'h_i' and include the value (h_i = ___ m)
2. Label starting velocity as 'v_i' and include the value (v_i = ___ m/s)
3. Label ending height as 'h_f' and include the value (h_f = ___ m)
4. Label ending velocity as 'v_f' and include the value (v_f = ___ m/s)

Find values for h and v in 2nd step

Clever Title of this Project

By: _____ Block: ____

4th

Write a paragraph of the Energy conversions.

1. Use accurate academic vocabulary (position, closed system, Total Mechanical Energy, height, velocity, E_K, E_{GRAV}, Pie charts, Law of Conservation of Energy)
2. Compare the E_{GRAV} Before the fall to E_K right before it hits the ground.

2nd

LoggerPro 'y' direction position graph.
On the graph, mark the the starting height as 'h_i' and mark the ending height as 'h_f'

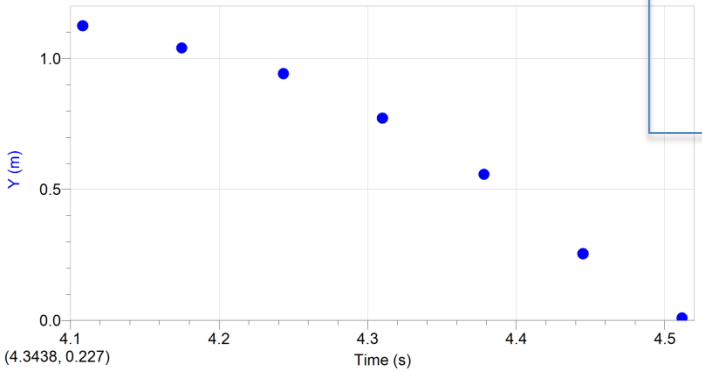
LoggerPro 'y' direction velocity graph.
On the graph, mark the starting velocity as 'v_i' and mark the ending velocity as 'v_f'

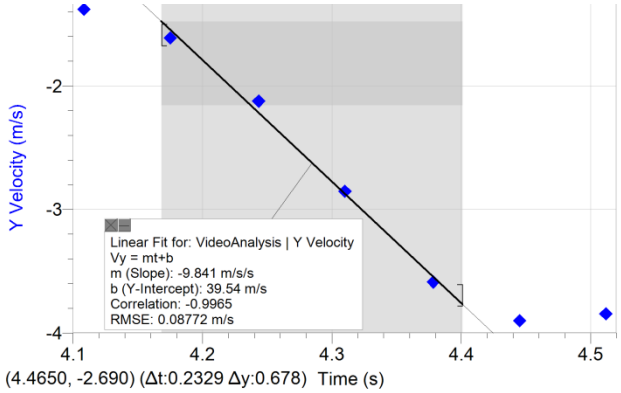
3rd

Draw 4 Energy Pie Charts for the following positions:

1. Before starting to fall.
2. ¼ of the distance to the floor.
3. ½ of the distance to the floor.
4. Right before hitting the floor.

On each pie chart, label the 'sections' of the pie to show how E_{GRAV} changes to E_K.





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By: _____ Block: ____

1. Before starting to fall.
2. ¼ of the distance to the floor.
3. ½ way to the floor.
4. Right before hitting the floor.