

This assignment serves to introduce you to the Tracker Motion Analysis software and to review concepts of 1-Dimensional motion.

Procedure

1. Go to my teacher page (<http://jmh.nbed.nb.ca/teacher/mr-macdonald>) and scroll down to the note for February 20.
2. Right-click on the file that is named: *cart_collision_mass_difference.mov* and choose *save link as...*
3. Save the file to your *H:/*
4. Open the Tracker program (under the Start Menu).
5. Load the file you just downloaded and set up the correct parameters.
 - a. I will go over the instructions again on setting up the video for analysis.
6. Track the red car as it travels from the left side, collides and returns to the left side.
7. Use a line of best fit of your data to figure out how fast the car was going before and after the collision with the blue car.

Analysis

1. Open a WORD document to write your analysis and answer the following questions.
2. Insert two copies of the graphical analysis – one showing the analysis of the car as it moves right and the other as it moves left.
3. What was the velocity of the car as it moved to the right? Left?
4. Collect the results from two other groups (include who they were).
5. Did each group have the same result for the car's velocities? Were you close or is there a lot of disagreement in the results?
 - a. Write two reasons why another group could have a different result than you.
6. How do you think it was possible for the red car to gain speed? Where did that speed come from?
7. Save your results with your group's names in the file name and tell me whose account it is saved under and I will retrieve it.

We will be doing a similar exercise with an object that is clearly accelerating. If there is an object that you want to analyze in a similar manner then share your idea with me and we will look into filming it.