

Uniform Motion Lab Checklist

Handwritten Portion:

- Appearance should be neat (graph paper should have been used for data tables and graphs). (10 points)
- Title of the Lab (5 points)
- Part 1 Data Table (clearly labeled with units) (10 points)
- Part 2 Data Tables for all 3 trials (clearly labeled with units and 0,0 included) (20 points)
- 3 graphs (one for each trial). They may be plotted separately or on the same graph. If you used the same graph, a legend should be included clearly labeling which graph represents each trial. They also should be in 3 different colors if you plotted all on the same graph. (30 points)
- Any outliers should be labeled (5 points)
- Each graph should have a best-fit line. You should not have “connected the dots”. (30 points)
- Axes should be labeled with units and increments should be clearly labeled (10 points)
- Graph should have a title (5 points)
- Your work for calculating the slope of each graph should be clearly shown (with units) and should be rounded to 2 sig figs. (30 points)
- Results section should include the average of your slopes (must show your work) (10 points)
- Results section should also include the equation in terms of d and t (not y and x) and it should be based on the average slope you calculated. (10 points)
- Prediction section: How long will it take my marble to roll 1,000 meters?
You must clearly show your work and must convert your answer to minutes. I am not in your head—*clearly* communicate every step. See the Excel sample I did in class to see how you should clearly communicate every step if you are unsure. You can find a link to this in the calendar on my website. Your handwritten Prediction section will have a slightly different answer from your Excel Prediction section, because you are using the average of the slopes you calculated by hand whereas in Excel you are using the average of the slopes Excel calculated for you. (15 points)
- Procedure Section: A picture of your experimental setup is all you need for this section. (10 points)

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| Total Points Possible for Handwritten Portion: 200 |
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Excel/Typed Portion:

- Appearance (graphs and data tables should not have been cut off when you printed the report. Remember to click “Print Preview” then “Page Break View” so you can see how the pages will be separated. Then, click and drag to adjust the page cutoff as necessary. (10 points)
- Purpose of the lab (1-2 sentences. See the title of the lab and the Results section for huge clues as to what the purpose was.) (10 points)

- 3 Data Tables clearly titled Trial 1, etc. Also should include titles for each column with units. Numbers in the table should not include units as the units are already stated in the title of the column. (30 points)
- If you had to delete any outliers, that should be noted next to the cells you deleted them from. BLANK CELLS SHOULD HAVE “OUTLIER” WRITTEN NEXT TO THEM. (5 points)
- A graph underneath each data table (if you had to disregard an entire trial, you must include a note underneath the data table stating that it was a bad trial and did not include it). (30 points)
- Each graph should have a title and axes should be labeled with units (15 points)
- Each graph should have a best-fit line (30 points)
- Each graph should include an equation where the y-intercept was deleted & y and x were replaced with d and t. (30 points)
- Each graph should include the R^2 value. This should be close to 1. If it is not close to 1, you will not get full points here, because you must have forgotten to delete the outliers. (10 points)
- Results section should clearly communicate each step as to how you arrived at the average speed of your marble (rounded to 2 sig figs) and should also include units. See the sample from class. You can access this sample by clicking on the link in my calendar. (20 points)
- Prediction section should clearly communicate each step as to how you arrived at how long it will take your marble to roll 1,000 meters. Again, see the sample from class. You should have converted time to minutes and rounded to 2 sig figs. (30 points)
- Conclusion section (a paragraph IN YOUR OWN WORDS): Describe what uniform motion is and how to measure it in general. (15 points)

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| Total Points Possible for Excel/Typed Portion: 235 |
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| Total Points Possible for the Entire Lab Report: 435 |
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Note: Total points do not matter; I will convert your score to a percentage. My grades are based on percentages—NOT POINTS!! Labs (averaged together) are 10% of your grade in the class.