EXCEL WORD FAQ

1. **Do we need to include a reference/bibliography entry for the EWA2019 assignment within our own report?**
   No, you may use the information provided to you in the assignment and do not need to include a reference to the assignment in your report. You do need to include references for all other material used.

2. **For Question #1, should the uncertainties be calculated for each of the two trials or just for the average mass?**
   The uncertainties should be calculated based off the average mass.

3. **How many significant figures should the uncertainties in Question #1 be expressed to?**
   For this assignment, uncertainties should be expressed to the same number of decimal points as the corresponding number. For instance, if you had 11.111 ± 2.222 then the first number should be expressed to four significant figures as stated in the assignment (ex. 11.11) and the error should match the number of decimal places (ex. 2.22) giving you 11.11 ± 2.22. This is done since the uncertainty in a number does not need to be reported with more accuracy then the number itself.

   [Note that this is a simplification of the value and error reporting process you will be taught in your first year classes. In those, you be expressing uncertainties to one significant figure. There are also a variety of other rules surrounding significant figures and uncertainties that go along with this. We are not requiring you to use these rules for this assignment as many of you have not yet learned these rules.]

4. **For Question #1, are we expected to carry the uncertainty through to the end of the question?**
   No, for Question 1, uncertainties only need to be calculated for the empty columns in the table.

5. **For Question #1, Step 5, which columns in the tables represent the error bars?**
   The uncertainty columns in the tables correspond to the error bars. In this case, the uncertainty values represent the amount of error in the average mass (I.e. the average mass could be off by plus or minus the amount of the uncertainty).

6. **For Question #1, Step 5, how do we know if we should have horizontal errors bars, vertical error bars or both?**
   In order to determine which type of error bars to use you should consider the following. On your graph, the average mass should be on the y-axis and t should be on the x-axis. Vertical error bars correspond to the uncertainties/errors in the y-values and horizontal error bars correspond to the uncertainties in the x-values. You have the uncertainty of the average mass and the fixed uncertainty for t.

7. **When performing regression should the "Constant is Zero" be clicked?**

Clicking the "Constant is Zero" forces the regression line through zero. There are only select cases where this is used. For this assignment you should <u>not</u> have this clicked, since the best equation for the data does not necessarily have zero as the intercept. More information can be found in the Excel Tutorial found on the website.

https://my.engineering.queensu.ca/Current-Students/First-Year-Studies/excel-word-video-tutorial.html

8. **For Question #1, Step 8, what data should be selected as input?**
Note that the question in this case asks for the Descriptive Statistics on the total mass of the rocket during the rocket's launch. Therefore, as input you should be selecting the average total mass values. In general, you should always think about which data to do the Descriptive Statistics on and what the numbers mean.

9. **How should I format the title page of my report?**
For the title page, you can look at the sample solutions and follow that format. Make sure you included your name, student number, course number (APSC 100), and the submission date.

10. **In Question #1 and Question #2, how many significant figures should I display the given data to?**
You may display the data as given or to four significant figures.

11. **Can we assume that the data given has accuracy to 4 significant figures?**
Yes, for instance if you were given a measurement of 24 in the instructions you may assume it has accuracy to four significant figures (ie. 24.00).

12. **Should Question #1 and Question #2 each be broken down into sections for the Introduction, Results and Analysis, and Conclusion.**
Yes, Question #1 and Question #2 should both have an Introduction, Results and Analysis, and Conclusion. You may include subheading for each of these.

13. **For Question #2, Step 7, how do I know what values from the regression analysis I should use to fill in the table?**
Explanations of the output of the regression analysis can be found on pages 15 and 16 of the Excel Tutorial.