Linear Equations of Flags – Algebra 1

This project is due to Ms. Walker no later than Thursday, 3/6. The project will count as a quiz grade.

Many flags have straight lines: vertical line, horizontal lines, and diagonal lines. Let's investigate linear equations that can be found in the lines of these flags.

Your mission:

Find a flag of your choice from a country or state (any other type of flag will require approval from Ms. Walker). Your flag must have at least 3 lines. In order to receive the most credit for this project, you must have at least one of those lines with a positive slope, one of those lines with a negative slope, and one of those lines with a zero or undefined slope.

Once you have your flag picked out:

1. Draw the flag out on graphing paper.
2. Color each line a different color.
3. Plot points at the end of each line segment on the flag.
4. For each line (label each by line color):
    a. Create a table with 4 points for each line.
    b. Write an equation for each line. Each equation should be written in both slope intercept form and standard form.

An example of this project is available at my website.

(Over for grading rubric)

Grading Rubric for Flag Project:

	4	3	2	1	Score
Meeting Requirements of project	Student meets and exceeds all requirements of project. Flag used has at least 3 lines, and lines used include one positive slope, one negative slope, and one zero or undefined slope.	Student meets all requirements of project. Flag used has at least 3 lines, and lines used include one positive or negative slope AND one zero or undefined slope.	Student meets some requirements of project. Flag used has at least 3 lines of any slope.	Student does not meet requirements of project. Flag used has less than 3 lines of any slope.	
Accuracy of plotting flag	Student plots all points correctly on graph	Student plots 80% of points correctly on graph	Student plots 50% of points correctly on graph	Student plots less than 50% of points correctly on graph	
Accuracy of tables	Student has all ordered pairs in table correctly. Each table has at least 4 ordered pairs.	Student has 80% ordered pairs in table correctly. Each table has at least 4 ordered pairs.	Student has 50% ordered pairs in table correctly. Tables do not have at least 4 ordered pairs.	Student has less than 50% ordered pairs in table correctly. Tables do not have at least 4 ordered pairs.	
Accuracy of equation of lines	Student has all equations of lines for all lines in flag correct. All equations are in both slope-intercept and standard form.	Student has 80% of equations of lines correct for all lines in flag. All equations are in both slope-intercept and standard form.	Student has 50% of equations of lines correct for lines in flag , equations not created for all lines. Equations are not written in both slope-intercept as well as standard form.	Student has less than 50% of equations of lines correct for lines in flag , equations not created for all lines. Equations are not written in both slope-intercept as well as standard form.	
Neatness and organization of completed project	Project is well organized and presented in a manner that is easy to follow and understand. Project is attractive in design: multiple colors are used, project components are presented in an organized manner. Each line used for equations is a different color.	Project is well organized and presented in a manner that is easy to follow and understand. Each line used for equations is a different color.	Project components are included, but many not be organized or presented in a manner that is easy to follow and understand.	Project components are not easy to find, are unorganized, or not all parts of the project can be found in the project.	
Total					
Student Score					