

High Dive Project Rubric



Unit Objectives:

1. Break complex problems into smaller components
2. Identify independent variables and dependant variables in a problem, and clearly communicate them.
3. Identify the goal and the steps needed to solve complex problems

Overview: To conclude High Dive you will complete a final project. The goal of this final project is to show that you know how to solve the unit problem, and also reflect on your learning. Please note that this is an individual project, so you will turn in your project individually, however, you are welcome to work together developing your final product. Below are 3 options you can do for your project:

1. Screencast
2. Essay and Spreadsheet
3. Project of Choice (must have divine blessing)

Instructions for Turning in the Project:

Screencast:

1. Upload your video to youtube as unlisted
2. Email the link to your video to Ande

Essay and Spreadsheet:

1. Email your essay and spreadsheet to Ande

Name: _____

Option 1: Screencast

Description: Research says people retain information best when they teach it. This option is designed to utilize just that. Create a recording of yourself teaching how to solve the unit problem. This can be done in different ways, for example, create a screen recording in the Khan Academy style. Other ways include, filming yourself at a whiteboard and teaching it presentation style, or film over your shoulder while you outline the process on pieces of paper. For this option you will be graded on the criteria below.

1. **Introduction:** Provide a detailed explanation of what the problem is, and what you are trying to solve.
2. **ID Variables:** Provide a detailed description of each variable.
3. **Process:** Outline the steps you need to take to reach the answer. Provide an equation, and how you reached it for each step.
4. **Reflection/Conclusion:** Summarize the mathematics you learned during this Unit. Also, detail the hardest aspects of the unit, and what you learned from them.

Total: ____/32

Introduction	(8) The description of the unit is easy to understand, and includes the goal of the problem.	(6) The description is muddled but has the right idea, and the goal of the problem is included.	(4) It is clear that the problem is not understood, and the goal of the problem is not obvious.
ID Variables	(8) All of the variables are included and clearly identified.	(6) All of the variables are identified but it may be unclear what they all mean.	(4) Variables are not discussed in detail and it is unclear what they mean.
Process	(8) Outline of the process is included, and a thorough description of each step.	(6) The process of each step is muddled but each step is done correctly.	(4) Clear that there is not full understanding of the steps it takes to solve the problem.
Reflection/Conclusion	(8) Topics learned in this unit are relevant, and the reflection shows that there was thought and effort put into the Unit.	(6) Topics may not be included, but the reflection shows that there was thought and effort put into the Unit.	(4) It is clear that there is not full understanding, and/or lack of effort.

Self Grade: ____/32

Name: _____

Option 2: Essay and Spreadsheet

Description: You will write a brief essay using objective language that summarizes the unit and how to solve it. Each section of your essay should detail each step in solving the unit problem. Included with the essay, should be a working spreadsheet that can generalize the problem at any position of the ferris wheel. Below is the criteria you will be graded on.

Essay:

1. **Problem Statement:** A paragraph summarizing the unit, and what the goal of the problem is.
2. **ID variables:** This should be a table with a list of all the variables, with a description of what they represent.
3. **Process:** Provide a paragraph for each step and the equation used in that step.
4. **Conclusion:** A paragraph discussing your personal mathematical growth in this unit.

Essay: ____/24

Problem Statement	(6) Clear and concise and outlines the goal of the problem effectively	(4) Muddled but correctly outlines the goal of the problem	(2) The goal of the problem is unclear
ID Variables	(6) All variables are included and it's clear what each variable means	(4) All the variables are included but unclear what they mean	(2) Not all of the variables are included
Process	(6) The step by step process is clear and easy to follow	(4) Steps are muddled but the process arrives at the correct solution	(2) There is a lack of understanding on how to solve the problem
Conclusion	(6) Honest and insightful explanation of personal growth	(4) There is effort in learning the content, but unclear on growth	(2) Clearly there was not much effort put into this unit
Objective Language	(1) Avoids using "I, me, we, you" throughout the essay	(0) Uses objective language except in the conclusion	(-1) Does not use objective language in the essay

Spreadsheet: ____/8

Does it Work?	(4) Spreadsheet included and works	(2) Spreadsheet included but does not work	(0) No spreadsheet included
Clear/Organized	(4) Inputs, outputs, and result are clear	(2) Unorganized and muddled spreadsheet	(0) No spreadsheet included

Self Grade: ____/32 Total: ____/32

Name:

Option 3: Project of Choice

Description: Part of the beauty of project based learning is creativity. For this option you can create your own project idea that clearly reflects understanding of the content. An example of a project, could be coding the unit in Desmos like TJ, or anything you think could be cool. Please note that this is **not** a group project, and you are only allowed to work on this individually, but you are welcome to discuss with your peers.

Criteria:

1. Project idea must be well thought out, and shows you know the content.
2. Project idea must get approval from Kyle or Ande