**Pre-Calculus Project Topics**

**Chapter 4**

1. Unit Circle, evaluating trig functions for an angle in any quadrant
2. Basic sinusoids and their components (graph, write equation)
3. Graphs of all trig functions
4. Applied problems using trig

**Chapter 5**

1. Steps for simplifying an expression or proving an identity
2. Solve (right and non-right) triangles using trig, areas of non-right triangles
3. Ambiguous case of SSA (determine number of triangles and solve)

**Chapter 6**

1. Vectors – component form and linear form, magnitude and direction
2. Polar coordinates – including to/from rectangular
3. Parametric – graph, eliminate a parameter

**Chapter 8**

1. Conic sections – parabolas (components, graph in standard and generic conic form, writing equations)
2. Conic sections – ellipses/circles (components, graph in standard and generic conic form, writing equations)
3. Conic sections – hyperbolas (components, graph in standard and generic conic form, writing equations)

**Chapter 9**

1. Arithmetic sequences and series (including sums), recursive/explicit
2. Geometric sequences and series (including sums), recursive/explicit
3. Counting Methods and Probability

**Pre-Calculus – Review of Concepts for Semester 2 Final**

1. Sign up for a topic in posted Google Doc (no duplicates – no deleting).
2. Upload your completed project to youtube and send your teacher the link.
3. You will be required to watch a particular video playlist and submit a peer review of each video. These playlists will correspond to the review lesson and assignment the following day. Details for how to find and access a particular playlist will be posted at a later date.

**Basic Requirements:**

* ~ 5 minutes
* Basic review of chosen concept
* At least one example of each type of question that could be asked regarding this topic.

Total points possible: 30

Maximum for static presentation (Prezzi, PowerPoint, poster, etc.) – up to 25/30 points

Maximum for animated presentation (Jing, Screencast-o-matic, Educreations, etc.) – up to 30/30 points

**Teacher Rubric:**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Points Possible | Score | Explanation |
| Meets Requirements | 5 |  |  |
| Usefulness | 5 |  |  |
| Accuracy | 5 |  |  |
| Animation | 5 |  |  |
| Peer Ratings | 10 |  |  |
|  |  |  |  |

**Peer Rubric:**

|  |  |  |
| --- | --- | --- |
|  | Points Possible | Average Score |
| Accuracy | 3 |  |
| Creativity | 3 |  |
| Usefulness | 4 |  |
| Top Pick  |  | +2 |