ALG III 5/10/18 Name:_____

PROJECT: Modeling Circular Motion (50 points) **PROJECT DUE: 5/17/18**

In this project you will be investigating a situation that involves circular motion. You will be using your knowledge of trigonometric functions to graph, analyze and write an equation that models your situation. Your finished project should be displayed as a poster.

Part 1: Introduction A brief explanation of the situation that the project covers. A picture that represents the situation should also be included.	**Point Value: 5**
Part 2: Data Display All data points should be organized in a neat table with column headings that include units.	**Point Value: 5**
Part 3: Graph All data points should be graphed and labeled on a coordinate grid. Axes should be scaled and labeled correctly. Include a sketch of smooth continuous curve that models the data points.	**Point Value: 10**
Part 4: Graph Characteristics A comprehensive list of characteristics including amplitude, period, vertical shift, and horizontal shift.	**Point Value: 10**
Part 5: Equation Using your characteristics from part 5, write an equation in the form of $f(x) = a\sin b(x-c)+d$ or $f(x) = a\cos b(x-c)+d$	**Point Value: 10**
Part 7: Interpolation Use your equation to predict the value of the dependent variable for a given independent variable that falls inside the data points.	**Point Value: 5**
Part 8: Calculator File: Transfer your calculator file.	**Point Value: 5**