In the first experiment we will be adding displacements and the second we will be adding forces. We will be drawing rays outside on the pavement with chalk to get large scale displacement vectors that we can then use to get the angles and add the together. The second experiment we will have a round force table that will have three pulleys around the sides, there will be strings and weights attached to the pulleys. The weights will simulate the force that is applied to the string horizontally. We will need to determine the force required to balance the mass. Vectors are quantities that have magnitude and direction. Components are the values respective the X and Y coordinates. You can use rX = rcos(theta) and rY = rsin(theta) to get the X and Y values relative to the vector. We can add two vectors if we lay them out and plot a new vector from the tail of one to the head of the other and find the length of that new vector.