Force Table Simulation

Physics

Using the following tool: Force Table Simulation, analyze various forces to determine the magnitude and direction of the force necessary to balance them in both the x- and y- directions.

In order to do this, you will need to use the following steps:

1) Break each existing force into x- and y-components. Use the angle measurement tool in combination with the trig formulas to make your calculations. Make sure you correctly identify each component as positive or negative.
2) Add all the x- and y-components together to come up with an overall force vector.
3) The balancing force will be 180 degrees away from the overall force vector you calculated.
4) Test your result to see if you made accurate calculations.
5) Try again – practice until you can routinely predict the correct equilibrium force.

We will be performing a similar experiment in class, using real masses and force tables, as a lab. If you can master this simulation, it will prepare you very well for the lab.