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) Use the equations $\sum F_x = 0$ and $\sum F_y = 0$: Sum the x- and y-components together and set them equal to zero (include variables for the unknown components in each dimension such as F_x and F_y).
3) Solve the equations to come up with an overall force (both magnitude and direction).
4) Test your result to see if you made accurate calculations.
5) Try again – practice until you can routinely predict the correct equilibrium force.