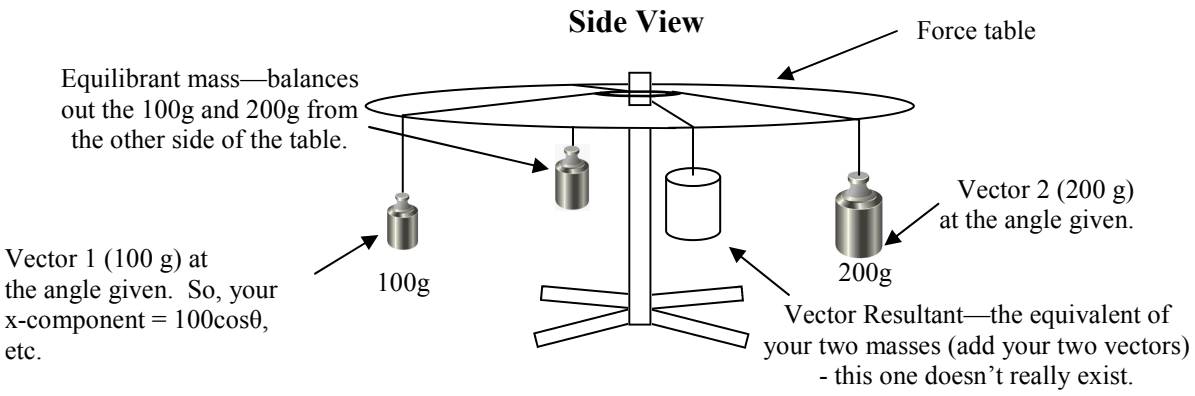
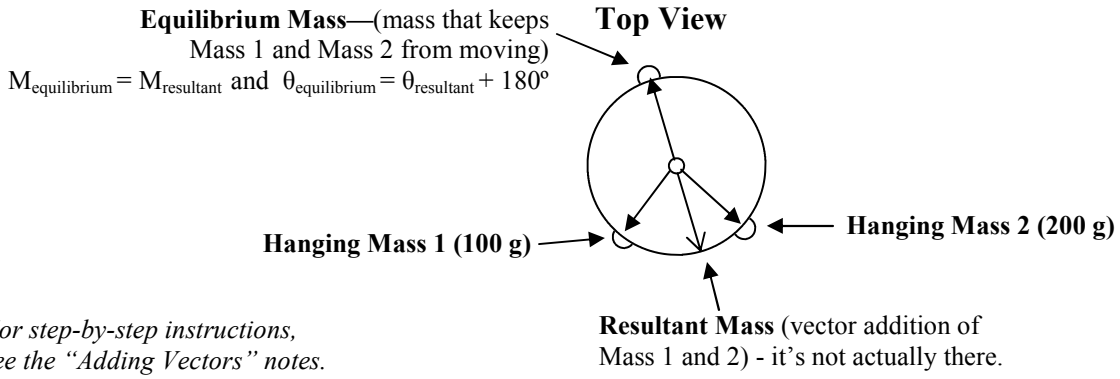
Force Table Vector Addition





For step-by-step instructions, see the "Adding Vectors" notes.

Vector 1 is: 100g at _____ X_1 = _____ Y_1 = _____

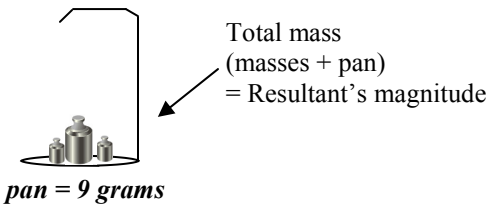
Vector 2 is: 200g at _____ X_2 = _____ Y_2 = _____

TOTALS: X_{total} = _____ Y_{total} = _____

Resultant Magnitude = _____ Direction: _____

Equilibrant Magnitude = _____ Direction: _____

Graphical Analysis—After you calculate the equilibrant mass mathematically, you will need to do so graphically. Decide which of your answers is best. You may wish to average your answer. (*Attach your graph paper.)*



Verification—You will measure out the correct amount of mass and place it at the correct direction on the force table. There are an array of different masses for you to make the necessary magnitude. These masses will be placed in a hanging pan, which itself has a **mass of 9 grams.** You will have to adjust your masses to account for the pan.

Equilibrant Mass _____

− Mass of pan − _____

= Mass in pan = _____ ← ***This is how much mass you put in the pan.***

Grading: −10 points for each failed attempt. After each attempt you must restart with different directions.