AP Physics B
Lab Activity: Vector Addition
Due Date:

Purpose: To practice adding vectors algebraically to find a resultant vector.

Background:
- on the force table, 0° = East, 90° = North, 180° = West, 270° = South
- each mass hanger has a mass of 5 g
- make sure the strings are horizontal as they pass over the pulleys
- you can adjust the length of the string by wrapping excess string around the notch on the hanger until the hanger does not touch the ground
- vector **A** = 55 g at 60° N of E
- vector **B** = 105 g at 45° S of E

Materials: force table, pulleys, string, scissors, mass hangers, assorted masses

Procedure:
1) Calculate vector **C** such that **A** + **B** + **C** = 0.
2) Set up the vectors on your force table by hanging the appropriate masses at the appropriate angles to verify that your calculations are correct. (if the ring balances in the middle of the force table, then your vectors are correct)

Question:
1) How does the vector sum of **A** + **B** compare to the magnitude and direction of vector **C**?