Name_____Period_____

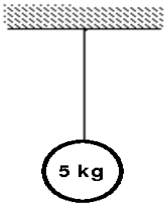
UNIT III WORKSHEET 3(H): INERTIA & EQUILIBRIUM

FORCE DIAGRAMS AND EQUILIBRIUM

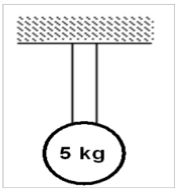
For **each** of the problems below, a) draw a system schema b) draw a properly scaled force diagram and c) write the summation equation that applies to the situation. Then use vector addition techniques to solve the problem.

1. Determine the tension in **each** cable in case A and case B.

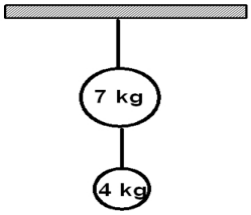
Case A



Case B



2. Determine the tension in **each** cable.



3. Sketch the shape of each graph representing the motion of the sphere. Then determine the weight of the sphere. The tension in the horizontal cable is 30 N.