

Center of Mass

Experiment

Name _____

In this experiment you will be creating a mobile which is really a center of mass/gravity problem. The mobile must have a minimum of four levels and you must calculate the center of mass for each level before making the bar.

Treat the bar as a uniform body. This means that the center of the bar is where you measure its mass. This must be included in your calculations.

You must have a minimum of three objects on each level with the bar (twelve objects total on the mobile)

Level 1

Mass object A _____	Distance for object A _____
Mass object B _____	Distance for object B _____
Mass object C _____	Distance for object C _____
Mass Bar _____	Distance for center of the bar _____

Calculations for determining the center of mass: (show all work)

Level 2

Mass object A _____	Distance for object A _____
Mass object B _____	Distance for object B _____
Mass object C _____	Distance for object C _____
Mass Bar _____	Distance for center of the bar _____

Calculations for determining the center of mass: (show all work)

Level 3

Mass object A _____ Distance for object A _____
Mass object B _____ Distance for object B _____
Mass object C _____ Distance for object C _____
Mass Bar _____ Distance for center of the bar _____

Calculations for determining the center of mass: (show all work)

Level 4

Mass object A _____ Distance for object A _____
Mass object B _____ Distance for object B _____
Mass object C _____ Distance for object C _____
Mass Bar _____ Distance for center of the bar _____

Calculations for determining the center of mass: (show all work)

When you are done hang your mobile from the ceiling and turn in you lab papers.