Paper Submission No. 08 & 09A (Fall 2018)

PHYS 203A: College Physics

Due date: Thursday, 2018 Nov 8, 12.35pm, in class

(Name) (Signature)

Instructions

1. Your submission should include only this page. Other forms of submissions will not be accepted. Please print this page, and write your solution on the back side.
2. Show your thought process in detail and organize it clearly.
3. Make sure your answer has the correct units and the right number of significant digits.

Question

The center of mass of a person may be determined by an arrangement shown in Figure 1 below. A light (massless) plank rests on two scales separated by a distance equal to the height $h = 1.80\,\text{m}$ of the person. The scales that measure the normal forces read $N_1 = F_{g1} = 500.0\,\text{N}$ and $N_2 = F_{g2} = 300.0\,\text{N}$. Determine the distance of the girl's center of mass from her feet.

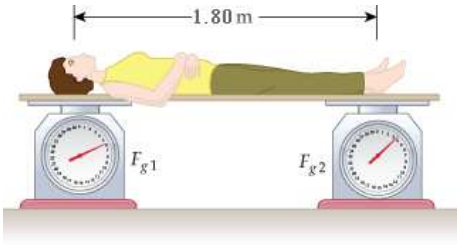

Figure 1: Center of mass.