Question 1

Go back over the steps in Taylor section 1.5, on "Multiparticle systems" (p. 20 and 21), which proves conservation of momentum, for the specific case N=3 (i.e, there are particles labeled 1,2, and 3 making up the system). Write out all the summations in Eq 1.27 explicitly (i.e, no "summation" symbols, really show what is being added up!) to make sure you understand the somewhat mathematically formal manipulations going on. In the space below, summarize. (Ex: My ASCII notation for "the force of 1 on particle 3" might be "F13", and F(external) on particle 2 might be "Fext,2")

Question 2

Look at Taylor Example 3.1 Suppose in that figure,
velocity v_1 = (+1,+1) m/s, and v_2=(1,-2) m/s.

Suppose further that $m_1=2m_2$.

What is the angle between the final velocity of the final "blob" (v), and the initial velocity labeled v_1?

Question 3

Look at Taylor's Example 3.2. Explain in your own words why Taylor says "For any given z, the integral over x and y runs over a circle of radius r=Rz/h". (Specifically, we're curious where that Rz/h came from!)

ALSO, explain in your own words how we know Y(center of mass)=0 (Please don't just say "by symmetry" - be a little more explicit!)

Information

Every week, we will ask you to submit a question you have about the reading assigned for the upcoming class. What seemed hard, was something confusing, what would you like us to spend class time on? And/or, if you prefer, make a (constructive) comment on someone else's question!

The place to do this is our "Discussion forum". Find the forum for this week, and post there!

(But, be sure to "submit" this survey at the bottom first, before going to that forum)

Note: this is an *obligatory* part of our weekly survey - I don't grade you on the content of what you post, but I DO need you to post something to get credit!

Reminder: reading assignments are always on our course calendar .