

Readings and Homework Set 5

Readings: Chapter 5, Sections 5 - 8; Chapter 6, Sections 1 - 4.

Problems, due Oct. 10 in class:

1. Textbook, Exercise 5.37.
2. Textbook, Exercise 5.55.
- 3/4.. Textbook, Exercise 5.71.
5. Textbook, Exercise 5.73.

6. In class I discussed the scattering of two particles of equal mass m , one of which is initially stationary and then other is hitting the first with velocity v . I found the final velocities of the two particles as a function of the scattering angle θ of the first particle relative to the direction it is approaching from. I also showed that the scattering angle between the two particles is 90° . I did the analysis by working in the lab frame. Do the same analysis working in the center of mass frame. (SOLVE ONLY AFTER TUESDAY'S LECTURE).