Physics 820 homework XI, due Mon Nov 15

Reading: Chapters 5, 6.1-5

Problems:

1. Goldstein, Problem 5-9.

2. Goldstein, Problem 5-11.

3. Goldstein, Problem 6-4.

4. Goldstein, Problem 6-12.

5. For the system in problem 6-12 in Goldstein, determine the particle positions as a function of time, if, at $t = 0$, (a) the displacements and the velocity of the second particle are zero while the first particle moves at a velocity v, (b) the velocities and the displacement of the second particle are zero while the first particle is displaced by $+d$. (c) Find the general solution of the equations of motion if the particles get subjected to friction forces proportional to velocities, with a proportionality coefficient ν.