

Math/Phys 266E  
Homework #1

Assigned: W Jan. 17.

Due: Tu Jan. 30.

On pp. 42-43 of Spencer:

Do #1, #4 (a) and (b), #5 (*omit* the streamlines part, but *do* the pathlines part).

On p. 64 of Holzapfel Handout:

Do #1 and #2.

*Hint:* For pathlines/particle paths, read the paragraph above equation (4.26) in Spencer, and solve three little (separable☺) ODEs:  $dx_i = v_i(x_1, x_2, x_3)dt$ ,  $i = 1, 2, 3$ . What are your initial conditions?!?!?