

Homework Assignment 7

Physics 105, Fall 04, Instructor: Petr Hořava

The due date of this assignment has been moved to Friday, November 5.

This week's reading consists of the remainder of Ch. 5, and Sections 6.1-6.3 of [HF].

Here are today's five problems:

1. Problem 4 of Ch. 5, p. 197 of [HF].
2. Part (b) of Problem 12 in Ch. 6, p. 245 of [HF].
3. Verify by an explicit calculation that the Poisson bracket $\{ , \}$ satisfies the Jacobi identity,

$$\{f, \{g, h\}\} + \{g, \{h, f\}\} + \{h, \{f, g\}\} = 0,$$

for arbitrary functions f, g, h of p_α, q_α, t .

4. Problem 14 of Ch. 6, p. 245 of [HF].
5. Problem 15 of Ch. 6, p. 245 of [HF].