

Physics 129a
Problem Set Number 6
Due Tuesday, November 10, 2009

Reading: Sections 1-4 of the course note on “Linear Differential Equations”.

24. Eigenfunctions of a kernel: Exercise 18 in the Integral Equations course note.
25. Relating a Volterra’s equation to a differential equation: Exercise 21 in the Integral Equations course note.
26. Self-adjoint differential operator: Exercise 2 in the Linear Differential Equations course note.
27. The momentum operator in quantum mechanics: Exercise 3 in the Linear Differential Equations course note.
28. Distributions and integral transforms: Exercise 5 in the Introduction to Distributions course note.