

Physics 195a
Problem set number 8
Due 5 PM, Monday, December 2, 2002

Notes about course:

- Homework should be turned in to the TA's mail slot on the first floor of East Bridge.
- Collaboration policy: OK to work together in small groups, and to help with each other's understanding. Best to first give problems a good try by yourself. Don't just copy someone else's work – whatever you turn in should be what you think you understand.
- There is a web page for this course, which should be referred to for the most up-to-date information. The URL:
<http://www.hep.caltech.edu/~fcp/ph195/>
- TA: Anura Abeyesinghe, anura@caltech.edu
- If you think a problem is completely trivial (and hence a waste of your time), you don't have to do it. Just write “trivial” where your solution would go, and you will get credit for it. Of course, this means you are volunteering to help the rest of the class understand it, if they don't find it so simple. . .

READING: Finish reading the “Solving the Schrödinger Equation: Resolvents” course note.

PROBLEMS:

41. Green's function solution of the finite square well/square bump: Exercise 5 of the Resolvent course note. Note that there is a typo in the statement of this problem, in Eqn. 128. The “ ρ ” in the denominator should be a “ ρ_0 ”.
42. Time development transformation for the one-dimensional harmonic oscillator: Exercise 6 of the Resolvent course note.
43. Problem moved to PS 10.