

Physics 741 – Graduate Quantum Mechanics 1

Homework Set C

Due Monday, September 8

1. A wave in one dimension takes the form at $t = 0$

$$\Psi(x, t = 0) = \psi(x) = (A/\pi)^{1/4} \exp\left(iKx - \frac{1}{2}Ax^2\right)$$

Note that this is identical with problem 1 on homework set B. Find the wave at all subsequent times.