

PHYS 451 Quantum Mechanics I (Spring 2018)
Quiz #1

The wave function of a particle is given by

$$\psi(x) = \begin{cases} Ax \exp(-bx + ikx), & x > 0 \\ 0, & x \leq 0 \end{cases},$$

where A , b , and k are some positive constants.

1. What is the most probable position of the particle?
2. What is the expected value of its momentum?