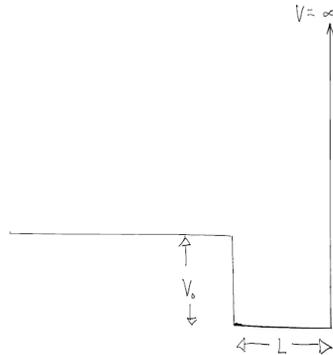


SP4.

Problem 3: 1-D Potential Scattering

For the potential shown below, we want to find the energy eigenfunctions which correspond to an incident flux coming from the left (with $E > V_0$) for a particle of mass m .



- Write down the wavefunction for all space. Feel free to choose a convenient coordinate system.
- Use the continuity conditions on the wavefunction to determine the coefficients in your wavefunction from part (a), and find the ratio of the reflected to incident amplitude for $x \rightarrow -\infty$. What is the reflection coefficient?