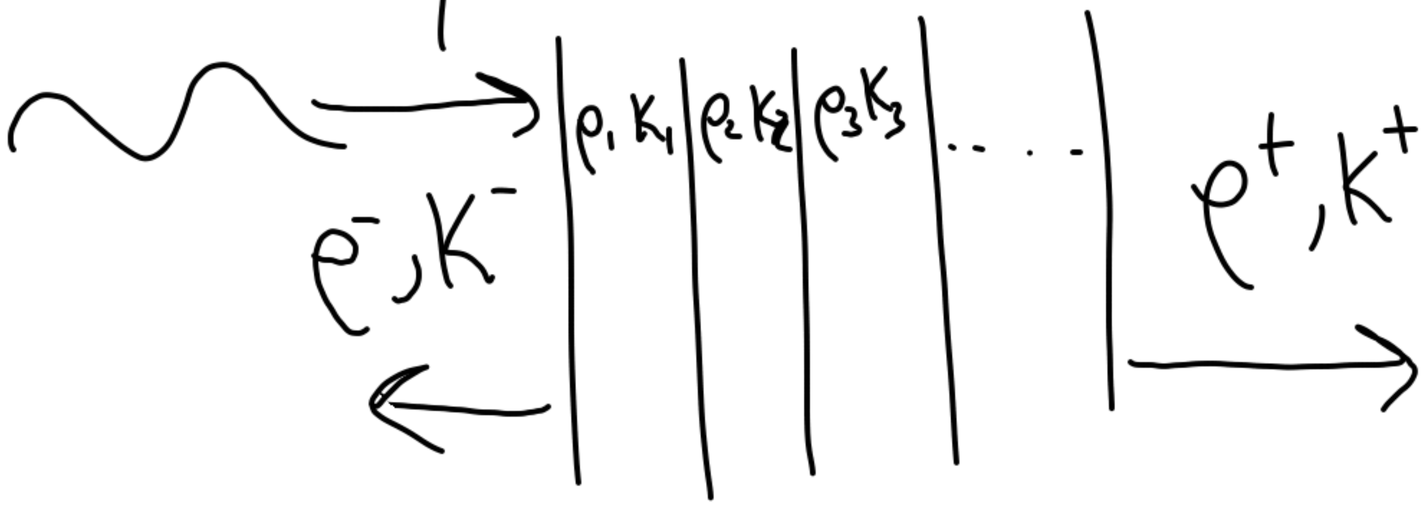
Acoustic scattering

$$p_t + K(x) u_x = 0$$

$$\rho(x) u_t + p_x = 0$$

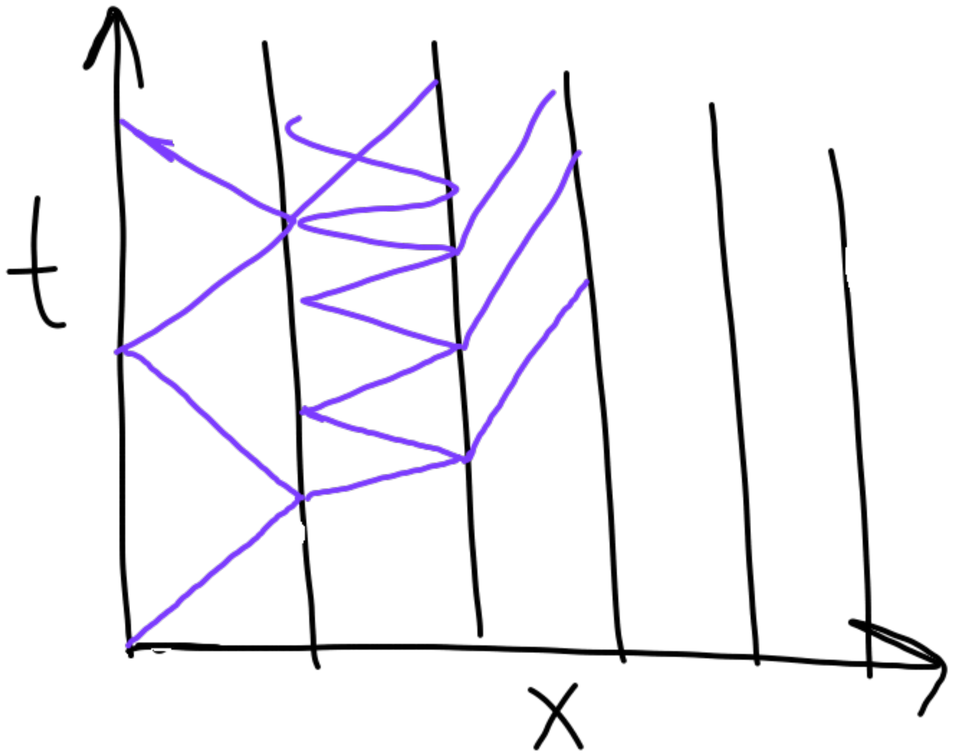
Scattering from a layered medium:



Scattering of a δ-function → Green's function

C_T C_R

Transmission/Reflection



To solve: consider all paths and add up the contributions.

1 2 3

2 1 3 ✓

1 3 2

2 3 1

3 1 2 ✓

3 2 1

$$r(x) = \frac{z'(x)}{2z(x)}$$

$$z = e^{2x} \quad (x \in [x_0, x_t])$$

$$r(x) = 1$$