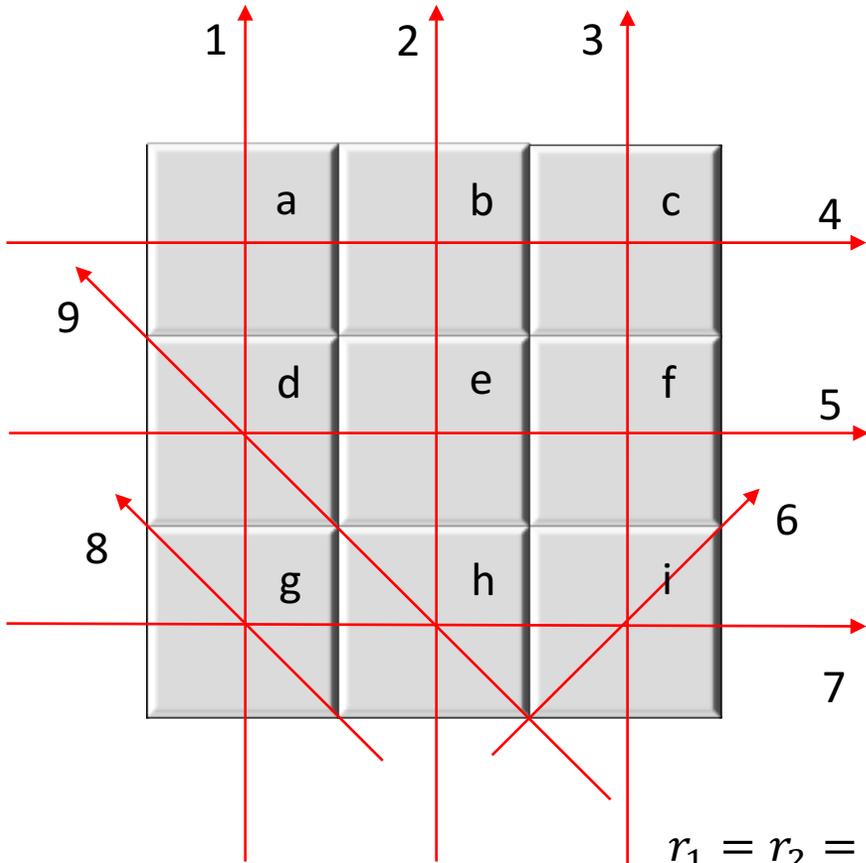


Body Wave Tomography



$$r_1 = r_2 = r_4 = r_5 = -0.01 \text{ sec};$$

$$r_3 = r_6 = r_7 = r_8 = r_9 = 0 \text{ sec};$$

Rays are numbered aside their arrows and blocks are marked by low-case characters inside them. Simple traveltimes (1 sec or $\sqrt{2}$ sec for one block) is assumed for practice.

For each ray path, we can get one equation looks like this,

$$r_i = \sum_{blocks} t_{ij} P_j$$

where r_i is traveltimes misfit between observation and prediction of ray path i , t_{ij} is absolute traveltimes in block j of ray path i , and P_j is velocity perturbation of block j .

For ray path 1 in the setting showed left, the equation should be,

$$r_1 = P_a + P_d + P_g$$

by assuming $t_{1a} = t_{1d} = t_{1g} = 1 \text{ sec}$.