3 DOFs in each node

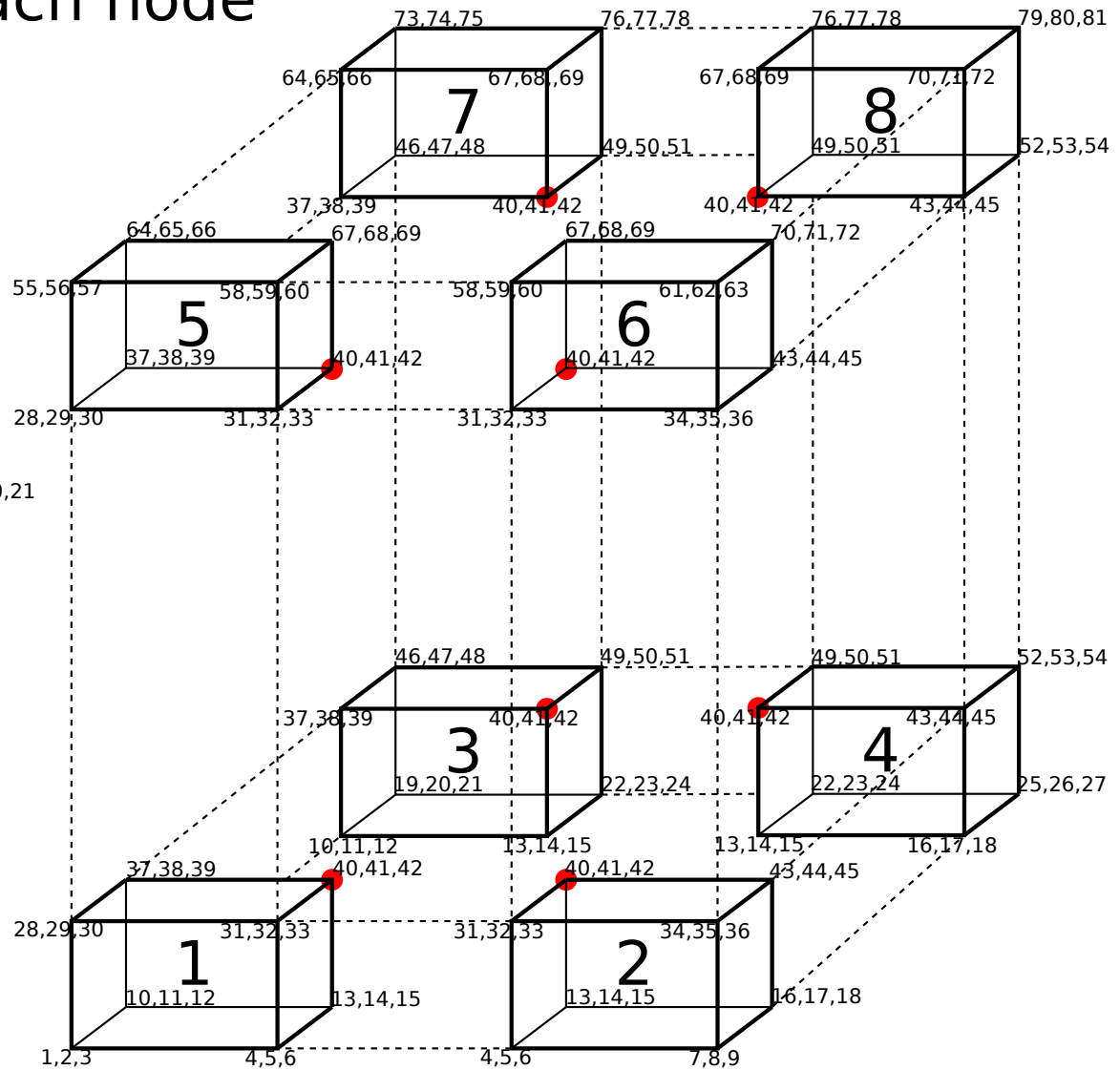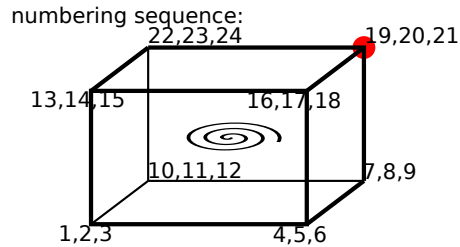numbering sequence:

numbering of nodes in stiffness matrix: