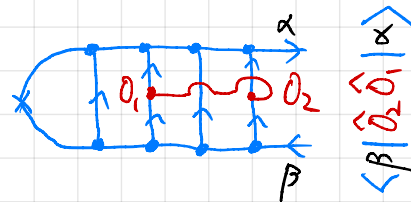
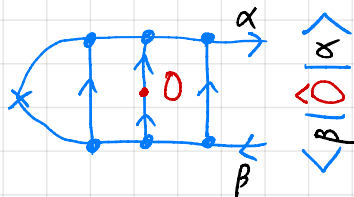
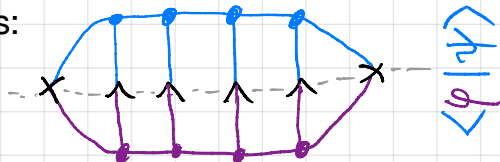


# Matrix elements, overlaps, and expectation values

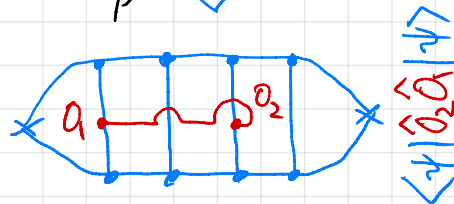
Matrix elements:



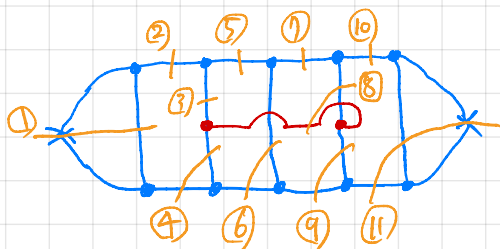
Overlaps:



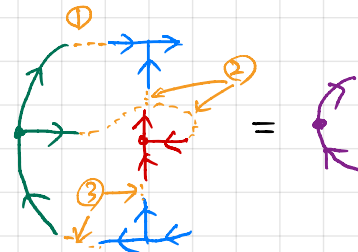
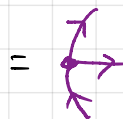
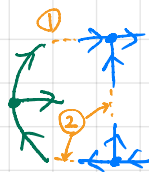
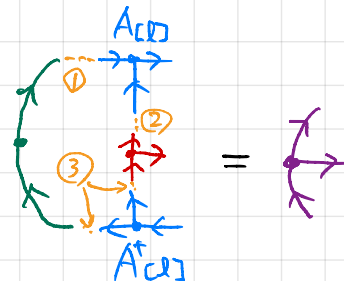
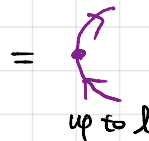
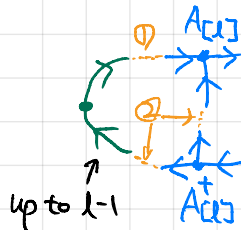
Expectation values:



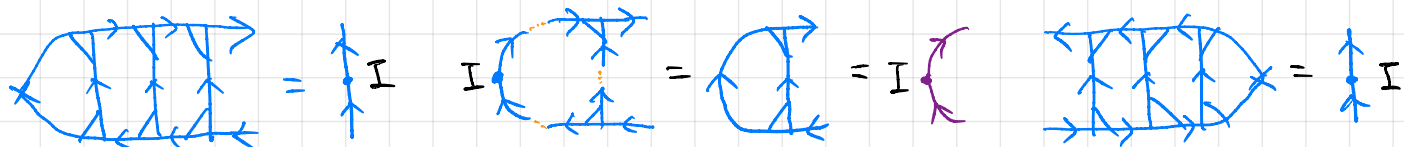
How to contract tensors efficiently?:  
Zipper!



At each iteration:

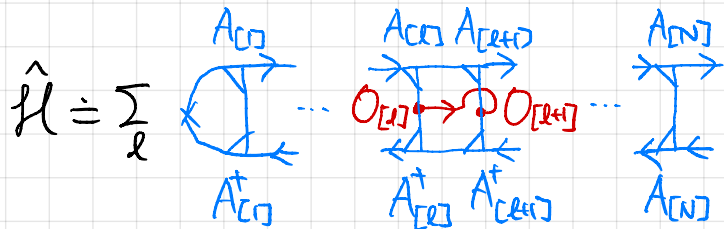


Left- and right-normalized tensors are useful



See also Sec. 4.2.1 of [Schollwoeck2011]

Matrix elements of Hamiltonian



At each iteration:

