

# Results for exercise 7.2.1 till 7.2.3

Obtained from Heisenberg\_chain.py

Ground state energy open boundaries: -1.6160254037844384  
Ground state energy for periodic boundaries: -1.9999999999999996  
Ground state energy open boundaries sparse matrix: -1.6160254037844384  
Memory used by dense matrix: 2048 bytes  
Memory used by sparse matrix: 768 bytes