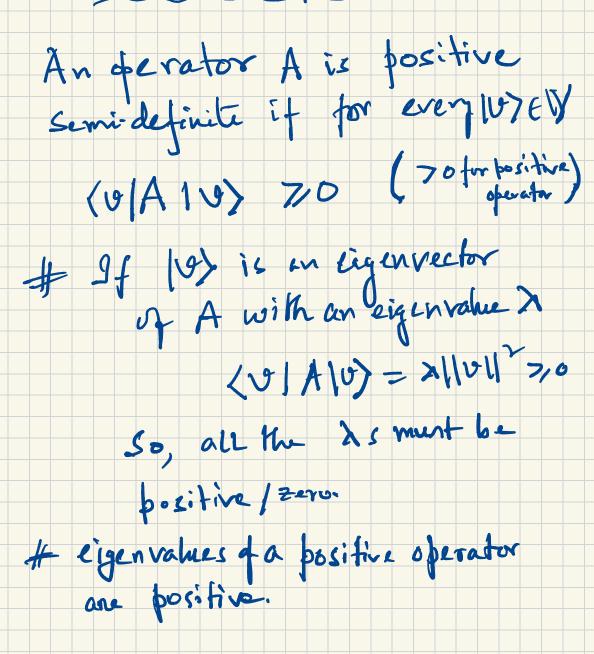
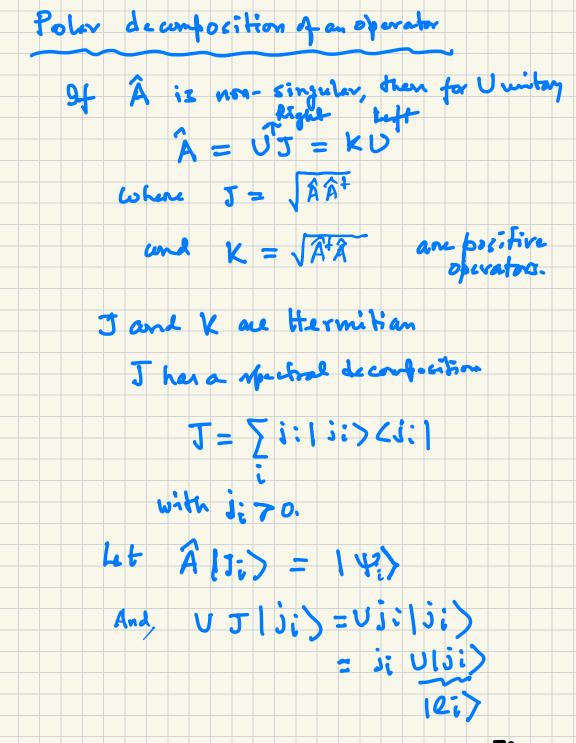
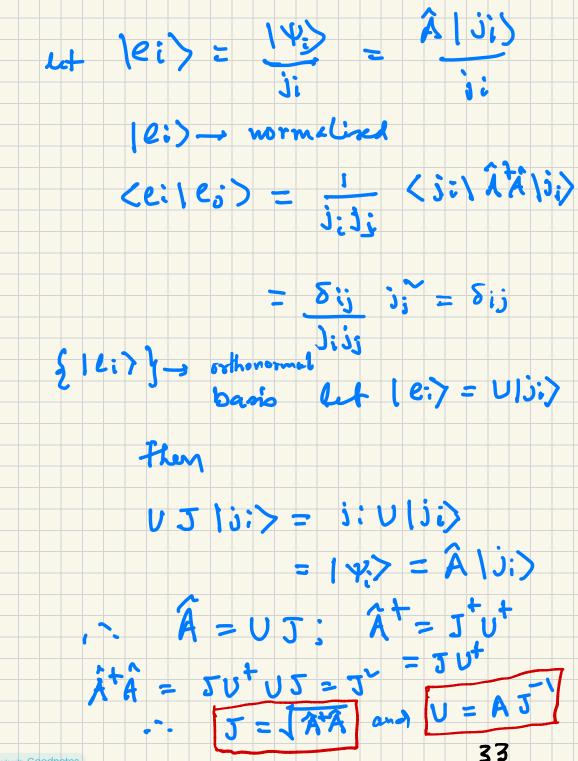
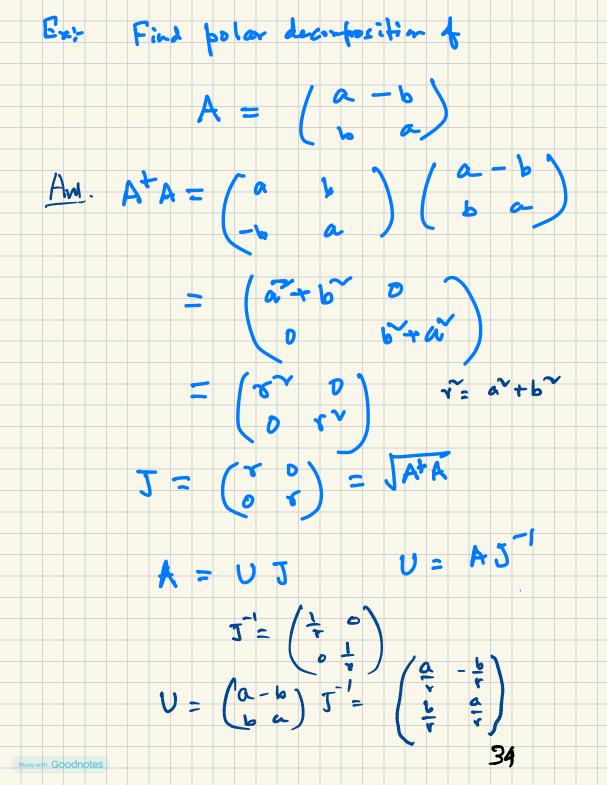
Positive Operators

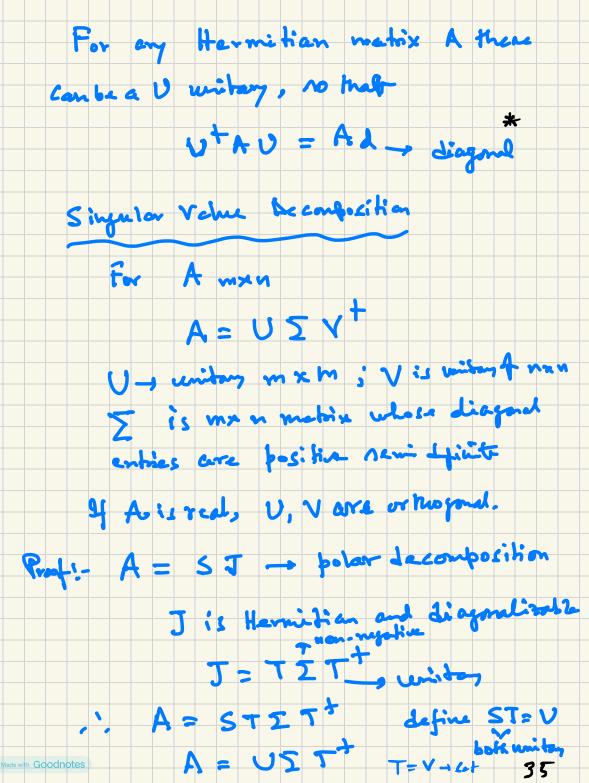


31

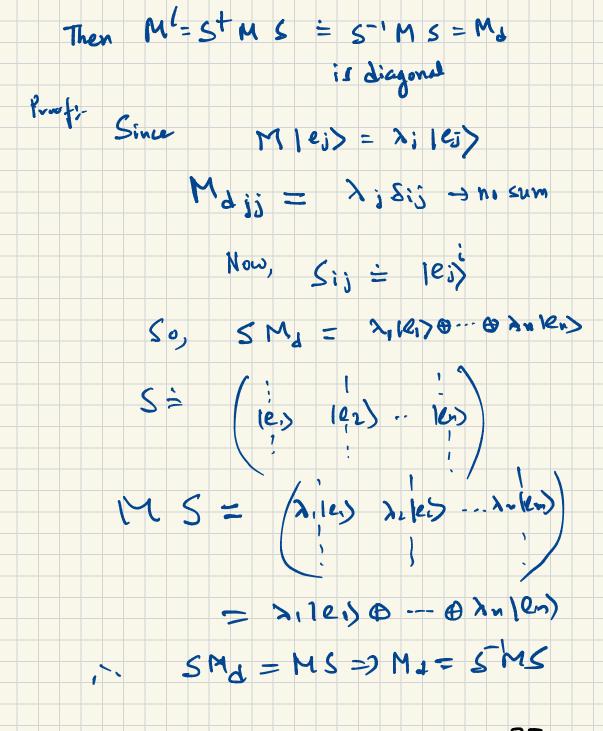






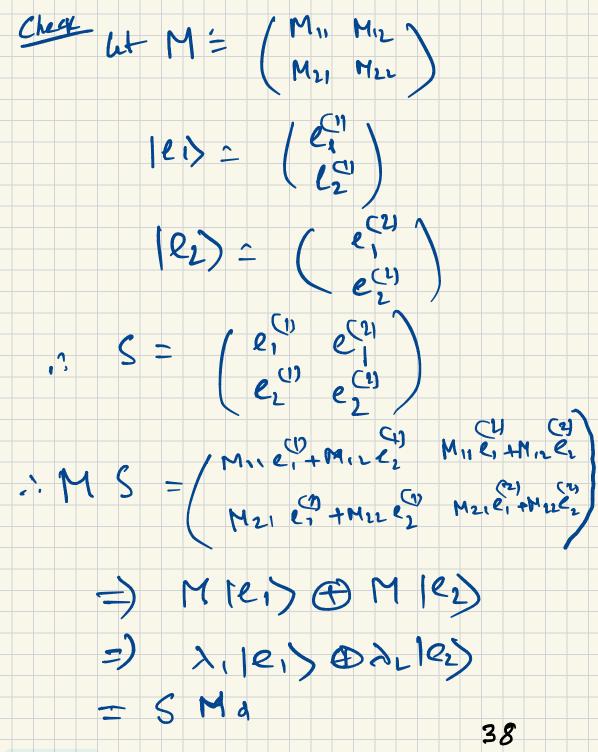


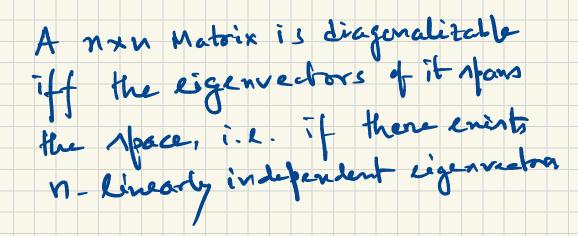
Show the product of two unitary operators is also renitary. Diagonalization :-Let an operator M can be represented w.r.t. a bacis {|wi} i=1,...,n. $\langle u_i | M | u_i \rangle = M_{ij}$ What is the operator M 12 r. 1. crother basii 10:) = 574i) ? (vil M/103) - mils M smi) . '. M' = 5 M S and M' Recall change of bends il donely Unitary operation St 5 is constructed by the eigenvectors of M i.e. if M has (e.), ... len) eigenvectors is (1ei) (ei) --- eigenvectorsthere 36

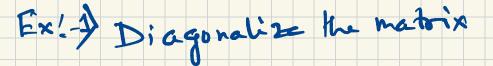


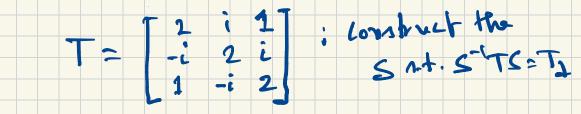
Made with Goodnotes

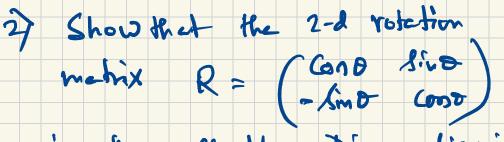
37



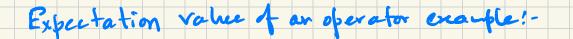


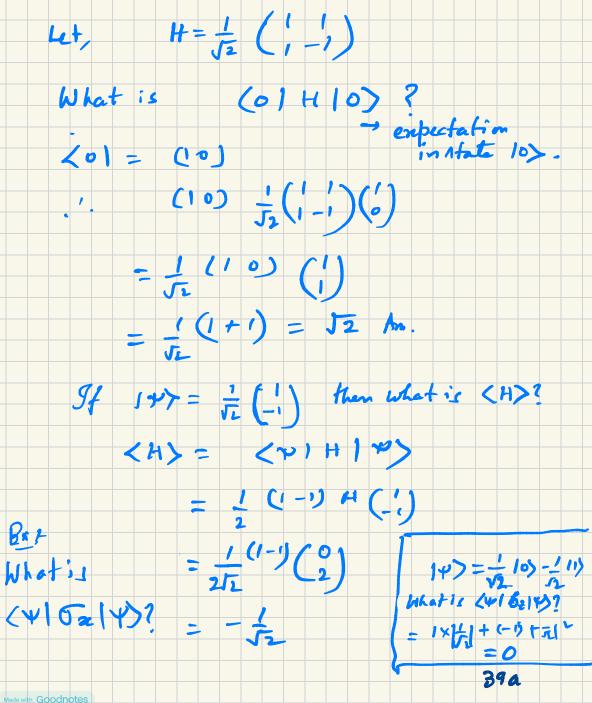


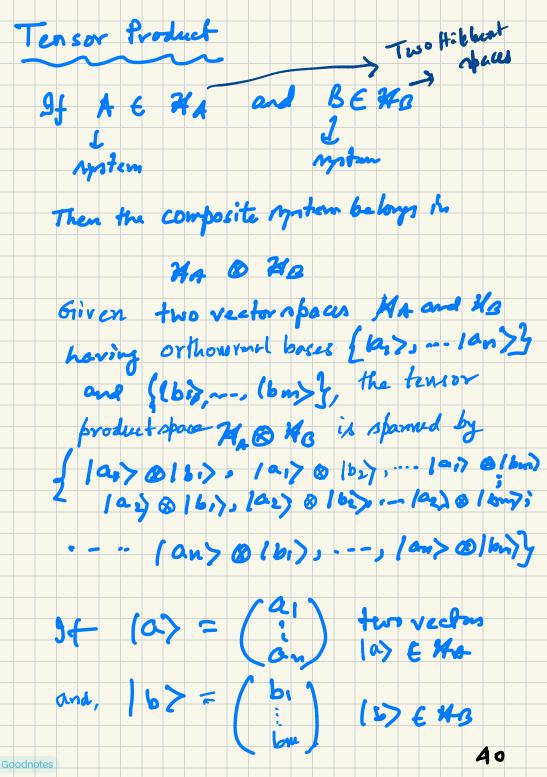


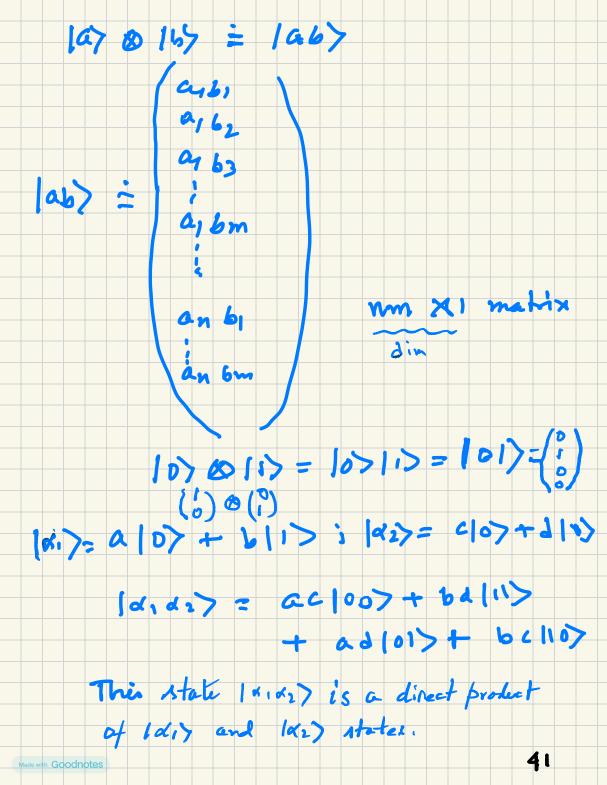


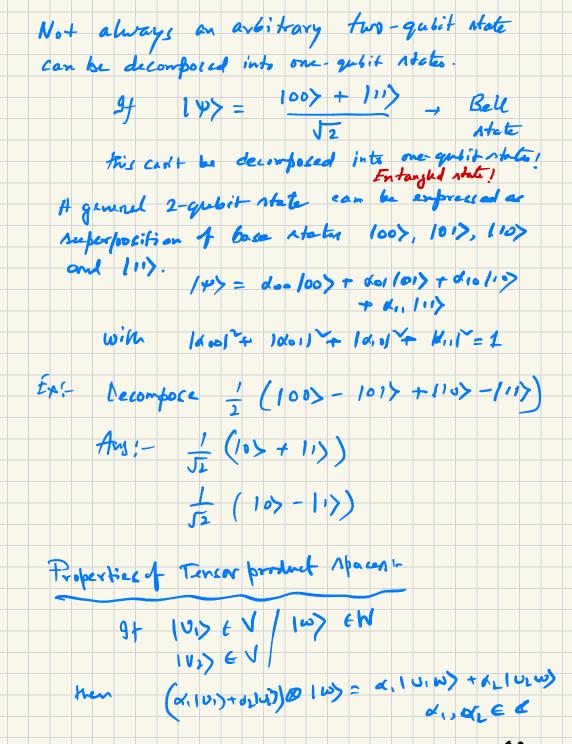
is disgonalisable... Diagonalise it.

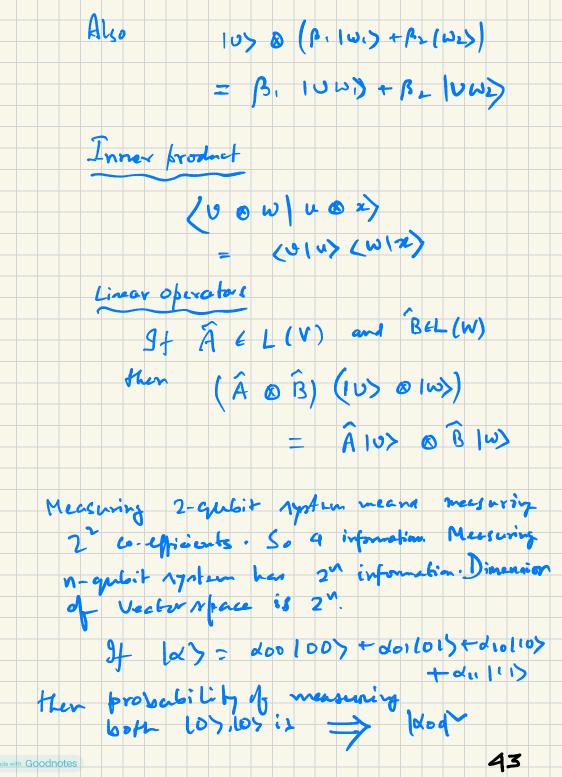


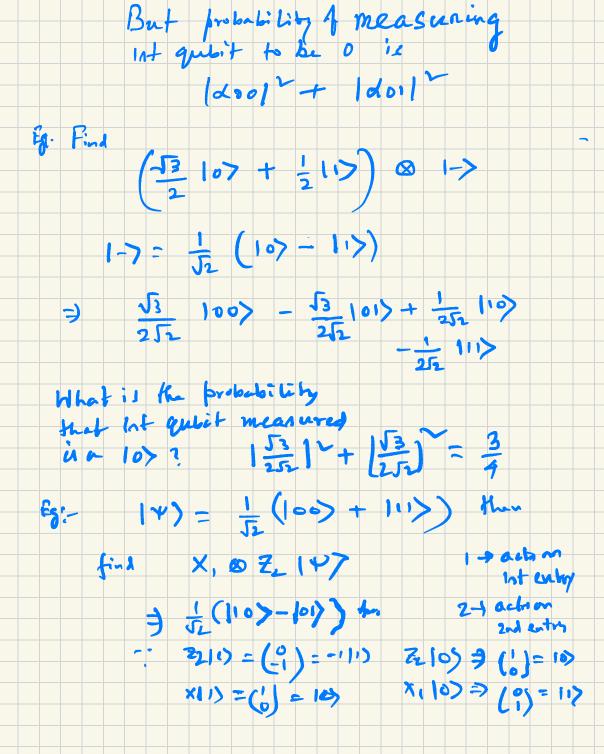












44

Quantum Grates (Single Queit)

