Date: _____   Name: _____

Q: Show that *i)* if a wavefunction psi is described by a Bloch state, its square modulus contributing to the charge density is periodic; *ii)* if psi is expanded in plane-waves up to a given kinetic energy cutoff Ecutwfc, show that the charge density has non zero Fourier components up 4 x Ecutwfc. Moreover, show that *iii)* if Fourier components of V(r)*psi(r) are desired only up to Ecutwfc, Fourier components of V(r) only up to 4 x Ecutrho are needed.

A: _____

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Indicate here a possible topic you would like to be covered during this course or a subject that you would like to be clarified further (we'll see what can be done, but no commitment):

_____

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