PHY410 Homework Set 7


2. [5 pts] Kittel-Kroemer, problem 6-3. Note that the average occupancies in the two cases there are not the same. Sketch those occupancies vs $x = \exp(\epsilon - \mu)/\tau$ illustrating the difference.

3. [5 pts] Kittel-Kroemer, problem 6-4. Note that you not really need to know relativity to work out this problem. You just need to use $\epsilon = pc$ rather than $\epsilon = p^2/2m$ as the relation between energy and momentum. A linear relation between energy and momentum is, incidentally, valid for electrons moving in graphene.

