HW #6
(due 04/02)

(i) Omar (9) Ch. 5, Ch. 6
(ii) Handout 6 "The Incredible Shrinking Circuit"

Problems:

1. 0 Q.1
2. 0 Q.4
3. 0 Q.6
4. 0 Q.9

5. Explain the origin of effective mass in the model based on applying the central equation to a wave function in which only $G = 0, \frac{2\pi}{a}$ are allowed (in a 1D system) and expanding the momenta in the vicinity of BZB. What is the relation between effective mass and $E(k)$ curvature? What is the effective mass for $k = 0$? Please use dispersion curves to demonstrate your reasoning.
6. O Pr. 2
7. O Pr. 5
8. O Pr. 11