Math 4550 Hints for questions for Feb. 10, 2009

1. If y and z are two distinct points of K closest to x, consider the triangle $\triangle xyz$.
2. (a) Might x and y minimize some function?
   (b) What relationship might a candidate hyperplane have to x and y from part (a)?
3. What is the relationship between the endpoints of a potential line segment containing a vertex and the hyperplane used to show it is a vertex?
4. How are the various convex combinations which make up the convex hull formed?
5. If x is an extreme point of F but not K, where are the endpoints of the line segment which proved that x is not an extreme point of K?