Comments on Assignment 6

Here are a few comments on Assignment 6. For many of the problems we have covered all the necessary material in class. But for some, we haven't covered the material yet, so here are some remarks to help you get started. I'll say more on Tuesday.

For several problems, you'll need to know that rotation by an angle θ is a linear transformation corresponding to the matrix A_θ given in Example 6 on p. 98. We showed in class how to compute the matrix of the linear function P_l of projection onto a line l (this is the same as the projection onto a vector in the direction of the line). The reflection across a line is given by $R_l = 2P_l - I$ (see Examples 3 and 5 of Section 2.2).

You'll also need the fact that $(AB)^{-1} = B^{-1}A^{-1}$ (Prop. 3.4, p. 108).