AMSC 607 / CMSC 764 Fall 2008
Homework 4

The IPM literature is littered with a lot of jargon that can be very daunting. I want you to be comfortable with the vocabulary so that you are not afraid to read new papers.

For each of the following terms, give the definition, and also list the number of the slide where Nemirovski first uses it. Each term is worth 5 points.

$\|h\|_x =$

Dikin Ellipsoid

Self-concordant function

$\rho(r) =$

Kernel of Hessian / Recessive subspace

Newton decrement

Newton displacement

Damped Newton iterate

Legendre transformation

Minkowski function