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Math221: Matrix Computations

Homework #7, Due Oct. 20, 2008

- Problems 3.7, 3.18, 3.21.

- Download the matlab code kahan.m from class website and show that the Kahan matrix does not reveal the numerical rank under QR with column pivoting. Also download the matlab code counterexample_GEPP.m which generalizes the Kahan matrix into a larger class of matrices that lead to very large element growth with GEPP. Discuss similar ways to generalize the Kahan matrix into a larger class of matrices that fail to reveal the numerical rank under QR with column pivoting.