

**MA 2073. HOMEWORK 6**  
**DUE: FRIDAY FEBRUARY 28**

Problems from text:

*Section 6.4:* 4, 11, 14, 16, 21, 23 (for this question you may ignore the  $QR$  factorization – we didn’t cover this)

*Section 8.3:* 4, 5, 9

*Section 6.6:* 1, 4, 12, 13, 17, 18, 24

Additional problems:

1. Read “PageRank Algorithm – The Mathematics of Google Search,” which is linked to under “Additional Resources”. Do problems 1 and 2 from this article, but for problem 2 only do the “dangling nodes” case. Note *column stochastic* in this article is the same as *Markov* in Strang.

You can also try the “disconnected components” portion of problem 2, and also problems 3 and 4 for fun (not for credit), but you will probably want to use a computer algebra package for this.

If you are interested in learning more about the mathematics of Google PageRank, you can read “The \$25,000,000,000 Eigenvector”, which is also on the course website.