

Linear Algebra
MATH 224W – Spring 2015

Week 3: more matrix arithmetic and matrix transformations

Writing Assignment #2

due Monday, Sept. 7

§1.3 #28(b), 43(a), 45

For #28(b), suppose that the r^{th} column of A consists entirely of zeros. Which column of BA consists entirely of zeros? Prove it. There is a solution to #43(c) on ShareLaTeX to use as a model for 43(a); here is the link: <https://www.sharelatex.com/project/55e734359d3c7ac43e72f275>. On #45, it may be helpful (and very efficient) to use #43. (You can use all of the parts of #43, even if you didn't prove them.)

AP #1 (*this stands for Additional Problem #1 - this is part of your assignment*)

Let A and B be $m \times n$ matrices. Show that $(A + B)^T = A^T + B^T$.

Remember what you read in the [Assignment Template And Learning LaTeX](#) document. For this assignment, you may want to use the following project as a template.

<https://www.sharelatex.com/project/55e6f9b09d3c7ac43e72e7a8>

Homework #2

due Thursday, Sept. 10

§1.3 #10, 11(c)(d)(e), 14(a)(b), 15(c)(d), 22, 23, 30, 36, 38(a), 40, 44(a)(b)

§1.4 #8(a), 10, 11, 12, 22, 23, 32