

Due: Thursday, August 30

1. Prove that $(\mathbf{A}\mathbf{B})' = \mathbf{B}'\mathbf{A}'$ for any matrices \mathbf{A} and \mathbf{B} .
 $m \times n$ $n \times k$
2. Complete the following exercises from Appendix A.9: 1–3, 7, 9, 10, 12–16, 18–20.
3. Prove Fact V6 from slide 59 of the preliminary linear algebra notes.
4. Let \mathbf{A} denote an arbitrary matrix. Let r denote the number of linearly independent rows of \mathbf{A} . Let c denote the number of linearly independent columns of \mathbf{A} . Prove that $r = c$.