

Please complete problems 1-6.

Problems 7-8 are extra credit homework. A correct proof of each problem will each add up 0.5% to your 20% homework grade. If you want to complete them, please separate your extra credit problems from your main homework problems and hand in them to me separately.

1. [FIS P166 5 (f) (g)].
2. [FIS P208 2 (a) (c) 3 (a) (c)]
3. [FIS P208 5-9 hold for general $n \times n$ matrices. Select two from these problems and prove that conclusions hold for 2×2 matrices].
4. [FIS P220 1].
5. [FIS P221 4].
6. [FIS P221 11].
7. Let $A, B \in M_{n \times n}(R)$. Prove that if $AB = Id$, then $BA = Id$.
8. [FIS P222 23].