MA 565 Homework 11
Due Friday, November 13

Axler 8.A # 5, 6, 15, 21

Axler 8.B # 2

Axler 8.C # 8

1. Prove that an $n \times n$ matrix with entries in $\mathbb{C}$ satisfying $A^3 = A$ can be diagonalized. Is the same true over *any* field?

2. Determine the Jordan canonical form of the $n \times n$ matrix over $\mathbb{F}_p$ whose entries are all equal to 1. (Note: your answer will depend on whether or not p divides n.)