

Math 308 Discussion Problems
Spring 2017

6. For each part of this problem, find a 2×2 matrix A satisfying the equation. Do not use the zero matrix or the identity matrix.

a) $A^2 = 0$

b) $A^2 = A$

c) $A^2 = I_2$

7. Find a 3×2 matrix A and a 2×3 matrix B such that AB is invertible or explain why such matrices cannot exist. Answer the same question with the requirement that BA be invertible.