

Homework on Complex Numbers for Math 250:05; Spring 2002

Problems: A.1:1,2, A:2:11, and

Problem A Let $z = 1 - i$. Find (a) The polar form of z . (b) The conjugate of z . (c) The inverse of z . (d) The power z^{10} of z . (e) For what values of n is z^n a real number?

Problem B Find the (real and complex) eigenvalues for the matrix

$$A = \begin{bmatrix} 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \\ 0 & 1 & 0 & 0 \\ 1 & 0 & 0 & 0 \end{bmatrix}$$