Exercise 7-0-1

A. J. Roberts, August 11, 2020

Each of the following pictures applies to some specific real matrix, say called A. The pictures plot $A\boldsymbol{x}$ (red) adjoined to the end of unit vectors $\boldsymbol{x}$ (blue). By inspection decide whether the matrix, in each case, has real eigenvalues or non-real complex eigenvalues.