Week 9 Linear Algebra worksheet
MATH1014

Consider the following 3×3 matrices:

(a) A has two distinct eigenvalues and is diagonalisable.
(b) B has two distinct eigenvalues and is not diagonalisable.
(c) C has three distinct eigenvalues and is not diagonalisable.

One of the descriptions above is impossible. Why? For each of the two descriptions which are possible, give an example of such a matrix.