

- b) Let G be a complete graph of order n . Denote by \mathbf{J} the $n \times n$ matrix all of whose entries are 1. Show that:
- i) $\mathbf{A} = \mathbf{J} - \mathbf{I}$,
 - ii) the eigenvalues of \mathbf{J} are 0 (with multiplicity $n - 1$) and n .