

5. For $\rho(R) \geq 1$, there exists an eigenvalue λ of R with $|\lambda| \geq 1$,
and its corresponding eigen-vector is v with $Rv = \lambda v$, $v \neq 0$
- For $\lambda \neq 1$, we choose $c=0$ and $x_0=v$. then $x_n = R^n v = \lambda^n v$
which do not converge
 - For $\lambda = 1$, we choose $x_0=v$ and $c=1$, then $x_n = v + n$
which do not converge