Exercises from Strang  P.315 8-10, 29,34; P.436 1,5-11,15,19,20; P.332 3,8,9,14(b),19,21,22,26,31;

Note: you may want to do the questions on Page 436 first!

**Extra Problem**

Find the eigenvalues and eigenvectors of the matrix

\[
A = \begin{pmatrix} 2 & 4 & 2 \\ -2 & 4 & 1 \\ 0 & -5 & 2 \end{pmatrix}.
\]

You should show all your work by hand, but you can use SAGE to check your answers.