- Repeat the previous homework for the following matrices

  11. $\begin{bmatrix} 2 & 0 \\ 0 & 2 \end{bmatrix}$ 12. $\begin{bmatrix} -2 & 0 \\ 0 & -2 \end{bmatrix}$ 13. $\begin{bmatrix} 0 & -1 \\ 1 & -1 \end{bmatrix}$ 14. $\begin{bmatrix} 0 & -1 \\ 1 & 1 \end{bmatrix}$

For each of these matrices #1 to #14, except for #5 and #6:
- Write down the corresponding system of differential equations.
- Find a fundamental matrix and write down the general solution. (The fundamental matrices and the general solutions should all be real even if the eigenvalues are complex.)
- Sketch a phase portrait of the corresponding system.

The following link contains an elaborate phase portrait gallery, do look it up it's quite delightful: `http://tinyurl.com/phaseportraits`