$$\begin{bmatrix} & \\ 0.75 & \end{bmatrix}$$

$$\begin{bmatrix} -0.3 - i\frac{3}{5} & -0.6 \\ 0.75 & 0.3 - i\frac{3}{5} \end{bmatrix}$$ Row reduce now to find eigenvectors

When did we do this in class???

no eigenvectors?

λ_2 next: $$\begin{bmatrix} 0.5 - (\frac{4}{5} - i\frac{3}{5}) & -0.6 \\ 0.75 & 1.1 - (\frac{4}{5} - i\frac{3}{5}) \end{bmatrix} \rightarrow$$

$$\begin{bmatrix} -0.3 + i\frac{3}{5} & -0.6 \\ 0.75 & 0.3 + i\frac{3}{5} \end{bmatrix}$$ → Row reduce to find eigenvectors

Ugh??? is there no eigenvectors? So no basis

no basis.

Eigenvalue of 0.5, $0.2 + 0.3i$, and $0.2 - 0.3i$

3. 3x3 matrix w eigenvalues of A matrix is it diagonalizable?

So if eigenvalues are distinct → then eigne vectors are linearly independent, then it's diagonalizable!

eigenvectors → $V_1 = \begin{bmatrix} 1 \\ -2 \\ 1 \end{bmatrix}$ $V_2 = \begin{bmatrix} 1+2i \\ 4i \\ 2 \end{bmatrix}$ $V_3 = \begin{bmatrix} 1-2i \\ -4i \\ 2 \end{bmatrix}$

$$\left[\begin{array}{ccc|c} 1 & 1+2i & 1-2i & 0 \\ -2 & 4i & -4i & 0 \\ 1 & 2 & 2 & 0 \\ 1 & -2 & 1 & 0 \\ 1+2i & 4i & 2 & 0 \\ 1-2i & -4i & 2 & 0 \end{array}\right]$$

~~Solve~~ $Ax = 0$

eigenvalues are all distinct and no eigenvalues has multiplicity > 1 so Matrix is diagonalizable