

There are matrices/transformations with special cases of eigenvectors and values.

① Uniform Scaling

- all vectors are eigenvectors

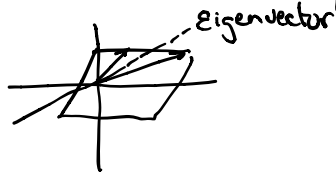
② 180° Rotation

- negative -1 eigenvalues for all eigenvectors.

③ Horizontal Shear + Vertical Scaling

- horizontal vector, eigenvalue $\underline{1}$.

- second between $\begin{bmatrix} 0 \\ 1 \end{bmatrix}$ and $\begin{bmatrix} 1 \\ 1 \end{bmatrix}$



④ Rotation around a dimension
- an axis of rotation