

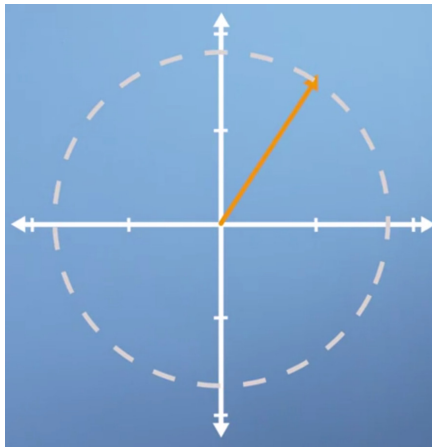
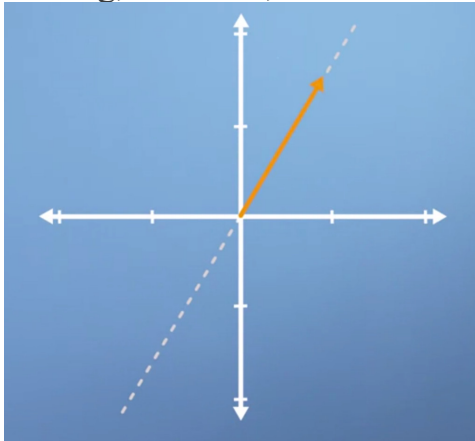
Week5 Eigen Factor

Sunday, November 1, 2020 9:10 PM

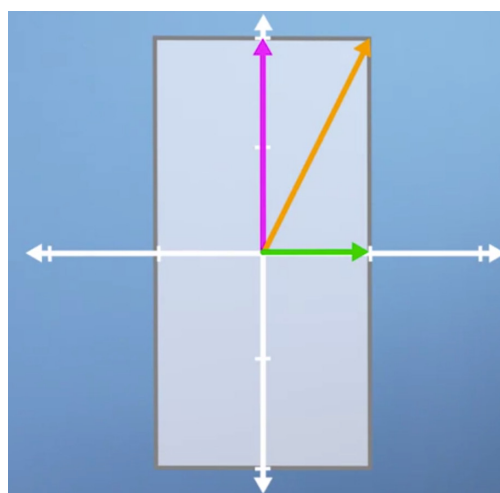
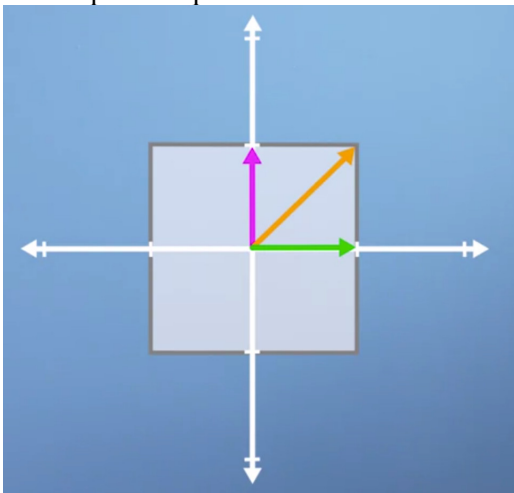
- **What are eigenvalues and eigenvectors?**

Space operation including

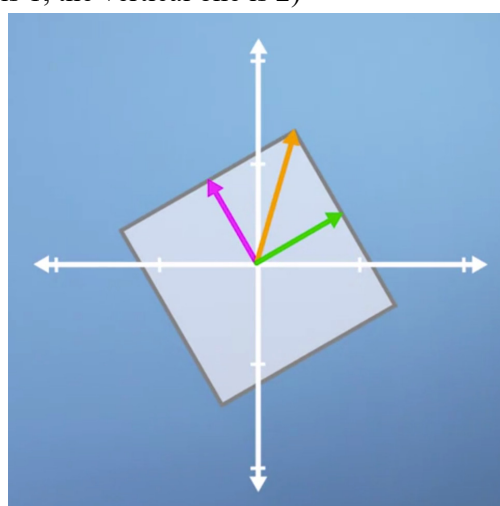
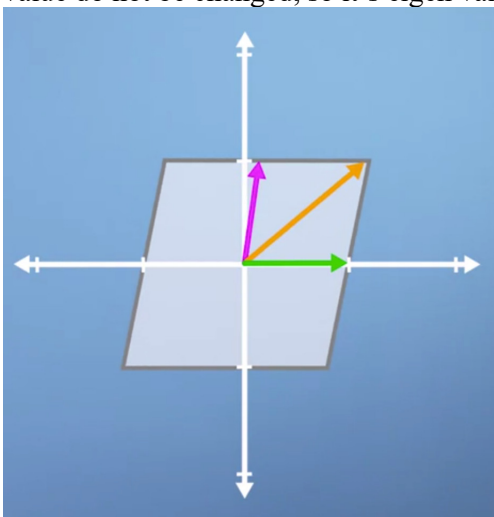
1. Scaling, rotations, shears



For spacing transformation, how to understand what happened when we do transformation? We use a square help us to visualize it.



For this situation, the horizontal vector **do not be changed** after transformation, it is special for characterizing this square, **which is why we refer to them as eigenvectors**. (Since the horizontal value do not be changed, so it's eigen value is 1, the vertical one is 2)



(only 1 eigen vector)

(no eigen vector)