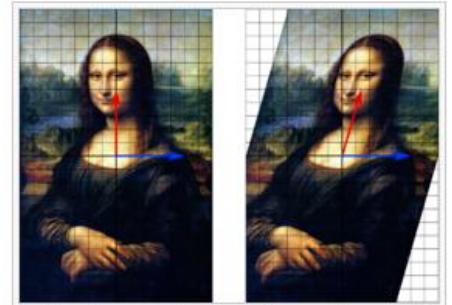


Section 6.1

A number λ 

In this shear mapping the red arrow changes direction but the blue arrow does not. The blue arrow is an eigenvector of this shear mapping, and since its length is unchanged its eigenvalue is 1.

en.wikipedia.org/wiki/Eigenvalue

$$\begin{bmatrix} 5 & -6 \\ 3 & -4 \end{bmatrix}$$

$$\begin{bmatrix} 1 & 0 & 0 \\ -6 & 8 & 2 \\ 12 & -15 & -3 \end{bmatrix}$$

$$\begin{bmatrix} 1 & 0 & 4 & 0 \\ 0 & 1 & 4 & 0 \\ 0 & 0 & 3 & 0 \\ 0 & 0 & 0 & 3 \end{bmatrix}$$

$$A = \begin{bmatrix} 0 & -4 \\ 36 & 0 \end{bmatrix}$$