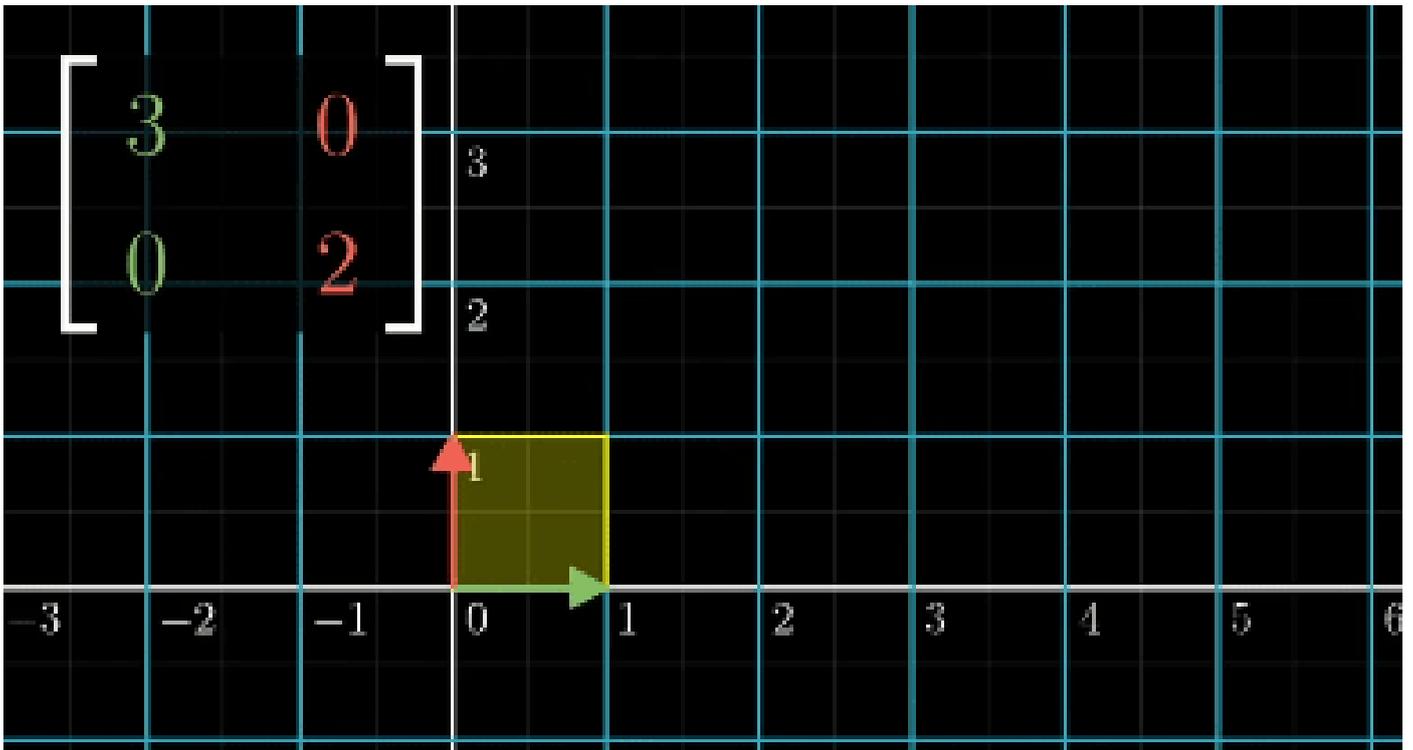


# Determinant

Determinant is the scaling factor that if the linear transformation changes any area

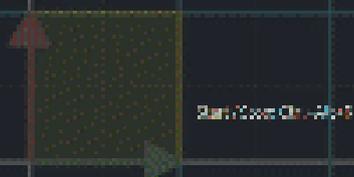
Scaling changes the area



Skewing does not change the area

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

11/14/2016



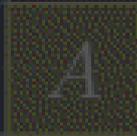
The “determinant” of a transformation

$$\begin{bmatrix} 4 & 2 \\ 2 & 1 \end{bmatrix}$$

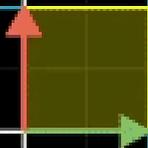


# The “determinant” of a transformation

$$\begin{bmatrix} 0 & 0 \\ 0 & 0 \end{bmatrix}$$



$$\det \begin{pmatrix} 1 & 2 \\ 1 & -1 \end{pmatrix} = -3.0$$



Left hand right hand rule is involved

Revision #3

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