Original image

Scaling (symmetrically)

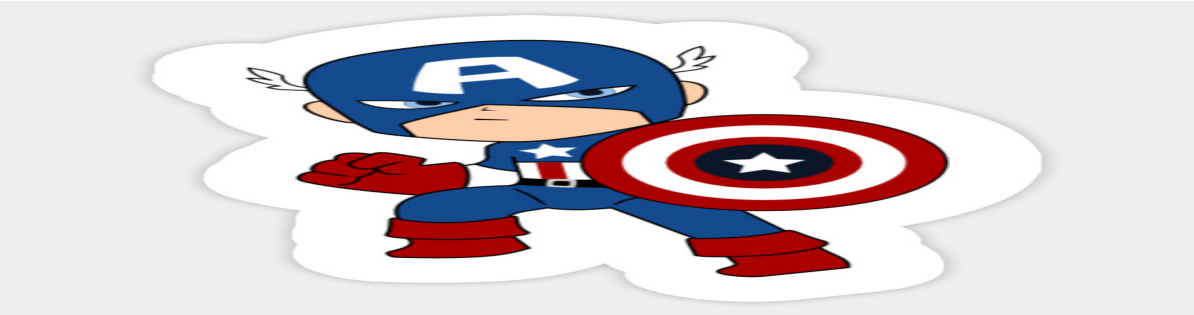
$$A = \begin{pmatrix} \alpha & 0 \\ 0 & \alpha \end{pmatrix}$$

$$\vec{x} \mapsto \begin{pmatrix} \alpha x_1 \\ \alpha x_2 \end{pmatrix}$$

$\bullet\ (\alpha, \frac{\alpha}{3})$

Scaling (asymmetrically)

$$A = \begin{pmatrix} \alpha_1 & 0 \\ 0 & \alpha_2 \end{pmatrix}$$



Rotation matrix ? (exer)

Reflection

matrix?

Shearing (skewing) (matrix?)