

Source:

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1 | Flo

Thought Processes

- As geometric transformations
- As algebraic transformations

Examples

$\begin{pmatrix} x & 0 \\ 0 & y \end{pmatrix}$ | Scale by x and y $\begin{pmatrix} 0 & 1 \\ -1 & 0 \end{pmatrix}$ | Rotate -90deg (easier to visualize geometrically, also two reflections (over $y = x$ and $y = 0$)) $\begin{pmatrix} 1 & 1 \\ 0 & 1 \end{pmatrix}$ | Add y to x (easier to visualize algebraically, also a shear)

Related

- [\[KBe2020math530retPracticeMultiplyMatrixIdentifyGroups\]](#)

2 | Rotation Matrices

- We can get 90deg rotations decently easily, but what about other angles?
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