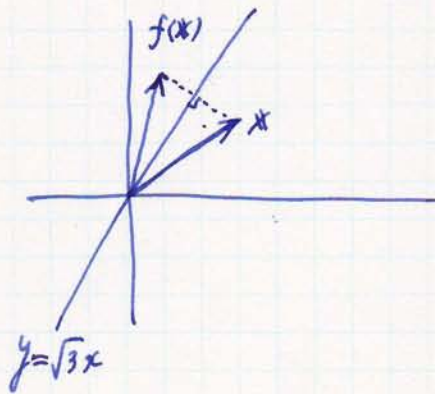


2007. 11. 5

例 $f: \mathbb{R}^2 \rightarrow \mathbb{R}^2$ は $x \in y = \sqrt{3}x$ に対称な写像.



f の表現行列を求めよ.

答: 直接の作図によ

$$f\left(\begin{pmatrix} 1 \\ 0 \end{pmatrix}\right) = \begin{pmatrix} -\frac{1}{2} \\ \frac{\sqrt{3}}{2} \end{pmatrix}, \quad f\left(\begin{pmatrix} 0 \\ 1 \end{pmatrix}\right) = \begin{pmatrix} \frac{\sqrt{3}}{2} \\ \frac{1}{2} \end{pmatrix}.$$

よ、

$$f(x) = \begin{pmatrix} -\frac{1}{2} & \frac{\sqrt{3}}{2} \\ \frac{\sqrt{3}}{2} & \frac{1}{2} \end{pmatrix} x.$$