Lecture 18: Orthogonal projection

Which matrices are orthogonal projections?

1

$$\begin{bmatrix} 3/5 \\ 0 \\ 4/5 \end{bmatrix}$$

2

$$\begin{bmatrix} 3/5 & 0 & 4/5 \end{bmatrix}$$

3

$$\begin{bmatrix} 3/5 & 0 & 4/5 \end{bmatrix} \cdot \begin{bmatrix} 3/5 \\ 0 \\ 4/5 \end{bmatrix}$$

4

$$\begin{bmatrix} 3/5 \\ 0 \\ 4/5 \end{bmatrix} \cdot \begin{bmatrix} 3/5 & 0 & 4/5 \end{bmatrix}$$

5

$$\begin{bmatrix} 3/5 & 0 \\ 0 & 1 \\ 4/5 & 0 \end{bmatrix}$$

6

$$\begin{bmatrix} 3/5 & 0 & 4/5 \\ 0 & 1 & 0 \end{bmatrix}$$

7

$$\begin{bmatrix} 3/5 & 0 \\ 0 & 1 \\ 4/5 & 0 \end{bmatrix} \cdot \begin{bmatrix} 3/5 & 0 & 4/5 \\ 0 & 1 & 0 \end{bmatrix}$$

8

$$\begin{bmatrix} 3/5 & 0 & 4/5 \\ 0 & 1 & 0 \end{bmatrix} \cdot \begin{bmatrix} 3/5 & 0 \\ 0 & 1 \\ 4/5 & 0 \end{bmatrix}$$