

1. $W = \left\{ \begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix}, \begin{bmatrix} 3 \\ 2 \\ 1 \end{bmatrix} \right\}$, is $\text{span}(W) = \mathbb{R}^3$?

False

2. What is the size of basis on upper triangular matrix $A_{33} \begin{bmatrix} X & X & X \\ 0 & X & X \\ 0 & 0 & X \end{bmatrix}$?

6

3. Is $\left\{ \begin{bmatrix} 2 \\ 0 \end{bmatrix}, \begin{bmatrix} 1 \\ 0 \end{bmatrix} \right\}$ a basis of \mathbb{R}^2 ?

False

4. What is the coordinate of $\begin{bmatrix} 2 & 4 \\ 6 & 8 \end{bmatrix}$ with basis $\begin{bmatrix} 2 & 0 \\ 0 & 0 \end{bmatrix}, \begin{bmatrix} 0 & 2 \\ 0 & 0 \end{bmatrix}, \begin{bmatrix} 0 & 0 \\ 2 & 0 \end{bmatrix}, \begin{bmatrix} 0 & 0 \\ 0 & 2 \end{bmatrix}$?

$\begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}$