

(4.3) Find a basis for the column space of $A = \begin{bmatrix} 1 & 1 & 1 \\ 0 & 1 & 1 \\ 0 & 0 & 1 \end{bmatrix}$

(4.4) Is $\vec{b} = \begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix}$ in the column space of A ? If so, give the coordinates of \vec{b} in your basis.

(4.5) What is the dimension of the column space of A ?

(4.3) Find a basis for the column space of $B = \begin{bmatrix} 1 & 2 & 0 & 3 & 4 \\ 0 & 0 & 1 & 5 & 6 \\ 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 1 \end{bmatrix}$

(4.4) Is $\vec{c} = \begin{bmatrix} 1 \\ 2 \\ 3 \\ 4 \end{bmatrix}$ in the column space of B ? If so, give the coordinates of \vec{c} in your basis.

(4.5) What is the dimension of the column space of B ?