Let

$$A = \begin{bmatrix} -2 & -3 \\ -4 & -6 \end{bmatrix}.$$

Find bases for the kernel and image of $T(\vec{x}) = A\vec{x}$.

A basis for the kernel of A is $\left\{ \begin{bmatrix} \\ \end{bmatrix} \right\}$.

A basis for the image of A is $\left\{ \begin{bmatrix} \\ \end{bmatrix} \right\}$.

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$$A = \begin{bmatrix} -2 & -3 \\ -4 & -6 \end{bmatrix}.$$

Find bases for the kernel and image of $T(\vec{x}) = A\vec{x}$.

A basis for the kernel of A is $\left\{ \begin{bmatrix} -3 \\ 2 \end{bmatrix} \right\}$.

A basis for the image of A is $\left\{ \begin{bmatrix} -1 \\ -2 \end{bmatrix} \right\}$.