

Coordinate Systems

In class we determined that

$$[\mathbf{v}]_B = \frac{1}{7} \begin{pmatrix} 1 \\ 4 \end{pmatrix},$$

where

$$\mathbf{v} = \begin{pmatrix} 1 \\ 2 \end{pmatrix}, \quad B = \left\{ \begin{pmatrix} 3 \\ -2 \end{pmatrix}, \begin{pmatrix} 1 \\ 4 \end{pmatrix} \right\}.$$

A graph of the vectors and the corresponding rotated coordinate system is shown.

