

Find a 2×2 matrix A such that $\begin{bmatrix} -5 \\ 1 \end{bmatrix}$ and $\begin{bmatrix} 2 \\ -3 \end{bmatrix}$ are eigenvectors of A with eigenvalues 1 and -3 , respectively.

$$A = \begin{bmatrix} \boxed{} & \boxed{} \\ \boxed{} & \boxed{} \end{bmatrix}$$

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$$A = \begin{bmatrix} \boxed{21/13} & \boxed{40/13} \\ \boxed{-12/13} & \boxed{-47/13} \end{bmatrix}$$