Let

$$A = \begin{bmatrix} 9 & -12 & -4 \\ 0 & -3 & 0 \\ 24 & -24 & -11 \end{bmatrix}.$$

Find an invertible matrix P and a diagonal matrix D such that $D = P^{-1}AP$.

$$P = \begin{bmatrix} \square & \square & \square \\ \square & \square & \square \\ \square & \square & \square \end{bmatrix}, \qquad D = \begin{bmatrix} \square & \square & \square \\ \square & \square & \square \\ \square & \square & \square \end{bmatrix}.$$

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$$A = \begin{bmatrix} 9 & -12 & -4 \\ 0 & -3 & 0 \\ 24 & -24 & -11 \end{bmatrix}.$$

Find an invertible matrix P and a diagonal matrix D such that $D = P^{-1}AP$.

$$P = \begin{bmatrix} -1 & -1 & 0 \\ 0 & -1 & -1 \\ -2 & 0 & 3 \end{bmatrix}, \qquad D = \begin{bmatrix} 1 & 0 & 0 \\ 0 & -3 & 0 \\ 0 & 0 & -3 \end{bmatrix}.$$