the process continued...

1. Find Eigenvalues:

2. Find Eigenvectors:

3. Form Matrices:

4. Construct the Diagonalization:

$$A = QDQ^{-1}$$

the process continued...

$$A = QDQ^{-1}$$

1. **Find Eigenvalues:**

   Determine the eigenvalues λ of the matrix A by solving the characteristic polynomial $\det(A - \lambda I) = 0$ where I is the identity matrix.

2. **Find Eigenvectors:**

   For each eigenvalue, find the corresponding eigenvectors by solving $(A - \lambda I)\vec{v} = 0$

3. **Form Matrices:**

   Arrange the eigenvectors as columns in a matrix Q and the eigenvalues along the diagonal in a matrix D.

4. **Construct the Diagonalization:**

   If A is diagonalizable you can express it as $A = QDQ^{-1}$

the recipe

$$A = QDQ^{-1}$$