

Step-1

Fill up the blank:

Let A and B be two matrices. Consider that they have the same Eigen values with full set of independent Eigen vectors. If they are factorized into same $\Lambda \in \mathbb{R}^{n \times n}$. Then $A = B$

Step-2

To get diagonalize any matrix is factorize into $S\Lambda S^{-1}$. So, if matrix A and B have same, $S\Lambda S^{-1}$, factorization value, they are said to be equal.

Step-3

Therefore, to get equality matrix A and B should be factorized into same $S\Lambda S^{-1}$.