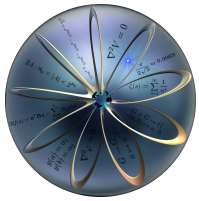

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eigenvalue

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Defines	eigenvector

Let V be a vector space over k and T a linear operator on V. An eigenvalue for T is an scalar λ (that is, an element of k) such that $T(z) = \lambda z$ for some nonzero vector $z \in V$. Is that case, we also say that z is an eigenvector of T.

This can also be expressed as follows: λ is an eigenvalue for T if the kernel of $A - \lambda I$ is non trivial.

A linear operator can have several eigenvalues (but no more than the dimension of the space). Eigenvectors corresponding to different eigenvalues are linearly independent.