Definition

Suppose $T \in \mathcal{L}(V)$ is self-adjoint operator over a field $\mathbf{F}$ which is $\mathbf{R}$ or $\mathbf{C}$. T is *nonnegative* (or *positive semidefinite*) if

$$\langle Tv, v \rangle \geq 0 \quad \text{for all}$$

for all $v \in V$.