



Complete Inner Product Decomposition

Proposition 1. *Let (V, F) be a complete inner product space. Let M be a closed subspace. then*

$$H = M \oplus M^\perp.$$

That is for all $x \in V$, there exists unique $z \in M$ and $q \in M^\perp$ such that $x = z + w$.

Complete Inner

Orthogon

Inn



