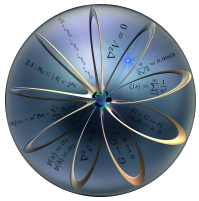

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Banach spaces with complemented subspaces

Canonical name	BanachSpacesWithComplementedSubspaces
Date of creation	2013-03-22 16:02:59
Last modified on	2013-03-22 16:02:59
Owner	aube (13953)
Last modified by	aube (13953)
Numerical id	13
Author	aube (13953)
Entry type	Theorem
Classification	msc 46C15
Synonym	Lindenstrauss-Tzafriri theorem
Synonym	Lindenstrauss-Tzafriri complemented subspace theorem

Theorem. [Lindenstrauss-Tzafriri]

Let V be a Banach space, such that for each closed subspace M there exists a closed subspace N such that $M \cap N = 0$ and $M + N = V$ (i.e. every closed subspace is complemented). Then V is isomorphic to a Hilbert space (i.e. there exists a Hilbert space structure on V that induces the original topology on V as a Banach space).