APPROXIMATION PROPERTY FOR BANACH SPACES

BY

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Abstract

An investigation of the approximation property for Banach spaces was presented in this thesis. Several equivalent forms of approximation property for Banach spaces due to Grothendieck are discussed. Proofs of several lemmas, which lead to the proof of the theorem that provides a necessary and sufficient condition for a Banach space to possess the approximation property, were constructed. Alternative proofs to two implications of the Grothendieck's formulations were constructed. An investigation on Per Enflo's construction of a Banach space that does not possess the approximation property was carried out.