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**Title:** Commutators on  $\ell_1$

**Abstract:** A classification of the commutators on  $\ell_1$  will be given. The main result is that the commutators on  $\ell_1$  are the operators not of the form  $\lambda I + K$  with  $\lambda \neq 0$  and  $K$  compact. We generalize Apostol's technique ("Commutators on  $\ell_p$  spaces", 1972) to obtain the classification and using this generalization we also obtain

partial results about commutators on Banach spaces  $X$  which can be represented as  $X \simeq \left( \bigoplus_{i=0}^{\infty} X \right)_p$  for some

$1 \leq p < \infty$ . In particular, it is shown that every compact operator on  $L_1$  is commutator. A characterization of the commutators on  $\ell_{p_1} \oplus \ell_{p_2} \oplus \cdots \oplus \ell_{p_n}$  is given. We also show that strictly singular operators on  $\ell_\infty$  are commutators.