

Title: On surjective ring homomorphisms between semi-simple commutative Banach algebras

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Let A and B be semi-simple commutative Banach algebras. We give a representation of surjective ring homomorphisms from A onto B in terms of complex ring homomorphisms and injective, continuous and closed mapping between the maximal ideal spaces. As a corollary, we prove that neither the disc algebra $A(\mathbb{D})$ nor the commutative Banach algebra of all bounded holomorphic functions $H^\infty(\mathbb{D})$ are ring homomorphic image of any semi-simple commutative regular Banach algebras. Under additional assumptions on the maximal ideal spaces, we also prove automatic linearity of ring homomorphisms.

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