

(A) Let \mathcal{F} be a normal family of holomorphic functions on Ω . Prove that \mathcal{F} is uniformly bounded on every compact subset of Ω .

(B) Let \mathcal{F} be the family of holomorphic functions on the open unit disc \mathbb{D} , consisting of the functions f_a for all $|a| > 1$, where $f_a(z) = \frac{1}{z-a}$ holomorphic on \mathbb{D} . Determine whether \mathcal{F} is a normal family, and give a proof.