

第三次作业 (Weyl's Lemma)

请于三月十四日周五 (校历第四周) 当堂上交本次作业。请独立完成。如有参与讨论者, 请引用或致谢他们。

1. A continuous function f is weakly-analytic on a region Ω if

$$\int_{\Omega} f \frac{\partial \phi}{\partial \bar{z}} dA = 0,$$

for all compactly supported continuously differentiable functions ϕ on Ω . Here dA denotes the area element. Prove that a continuous function is weakly-analytic if and only if it is analytic.