

第二次作业 (Green's Theorem)

请于三月七日周五 (校历第三周) 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. Let Γ be a bounded piecewise smooth domain in \mathbb{R}^2 with oriented boundary curve Γ . Also let X be an open neighborhood of $\bar{\Omega}$ in \mathbb{R}^2 , and let $g, h \in C^1(X)$. Then

$$\int_{\Gamma} gdx + hdy = \int_{\Omega} \left(\frac{\partial h}{\partial x} - \frac{\partial g}{\partial y} \right) dxdy.$$