Test 3 Notes

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November 8, 2023

Contents

1 Triple Integrals

Given a triple integral, to change the bounds on integration follow these steps:

- Draw the region of integration

- change the bounds of integration based on the region of intergration as drawn

2 Change of variables (Jacobians)

3   Curl

$$\textbf{Curl } \vec{F} = \langle \frac{\partial R}{\partial y} - \frac{\partial Q}{\partial z}, \frac{\partial P}{\partial z} - \frac{\partial R}{\partial x}, \frac{\partial Q}{\partial x} - \frac{\partial P}{\partial y} \rangle$$

If $\vec{F}$ is conservative, then $\textbf{Curl } \vec{F} = \vec{0}$