

MTS 382 LATEKS UYGULAMA 5

$$\frac{\partial^2 f}{\partial y \partial x} = \frac{\partial^2 f}{\partial x \partial y} \Rightarrow \nabla \times (\nabla f) = 0$$

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$$\iint_R h(u, v) \, dudv = \iint_B h(f(x, y), g(x, y)) |J_F| \, dxdy \quad \left(J_F = \det \begin{vmatrix} \frac{\partial f}{\partial x} & \frac{\partial f}{\partial y} \\ \frac{\partial g}{\partial x} & \frac{\partial g}{\partial y} \end{vmatrix} \right)$$

Genelleştirilmiş Stokes Teoremi: $\int_{\sigma} d\omega = \int_{\partial\sigma} \omega$

Euler' in Formülü: $\sum_{n=1}^{\infty} \frac{1}{n^s} = \prod_{p \text{ asal}} \frac{1}{1 - \frac{1}{p^s}} \quad (s > 1)$

$$\begin{pmatrix} 1 & 2 & 3 & 4 \\ 1 & 4 & 2 & 3 \end{pmatrix} \begin{pmatrix} 1 & 2 & 3 & 4 \\ 4 & 3 & 2 & 1 \end{pmatrix} = \begin{pmatrix} 1 & 2 & 3 & 4 \\ 4 & 1 & 3 & 2 \end{pmatrix}$$

$$f(x) = \begin{cases} \frac{1}{q} & x = \frac{p}{q} \quad (p, q \in \mathbb{Z}, (p, q) = 1, q > 0) \\ 0 & x \notin \mathbb{Q} \end{cases} \quad \text{ise} \quad \int_0^1 f(x) \, dx = 0 \quad \text{olur}$$

Diferensiyel-İntegral Hesabın Temel Teoremi (I. Şekli): $\int_a^b f(x) \, dx = \int f(x) \, dx \Big|_a^b$