Git hub website project

Saket Tiwari

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Fundamental Theorem of Calculus

If f : [a,b] $\to$ $\mathbf{R}$ *is integrable, and* $F : [a,b] \to \mathbf{R}$ *satisfies* $F'(x) = f(x)$ *for all* $x \in [a,b]$, *then* $\int_a^b f = F(a) - F(b)$.
(*ii*) *Let* $g : a,b] \to R$ *be integrable, and define* $G(x) = \int_a^x g$ *for all* $x \in [a,b]$. *Then, G is continous on* $[a,b]$. *If g is continous at some point* $c \in [a,b]$ *then G is differentiable at c* $G'(c) = g(c)$.

Gauss bonnet theorem

Suppose M is a compact two dimensional Riemmanian manifold with boundary ∂M.*Let K be the Gaussian Curvature of M, and let* k_g *be the geodesic curvature of* ∂M.*Then* $\int_M K dA + \int_{\partial M} k_g ds = 2\pi\chi(M)$
where dA is the area element of the surface and ds is the line element along the boundary of M. Here, $\chi(M)$ *is the Euler characteristic of M.*