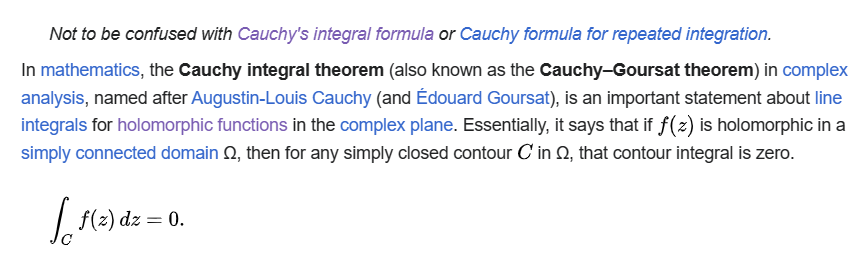
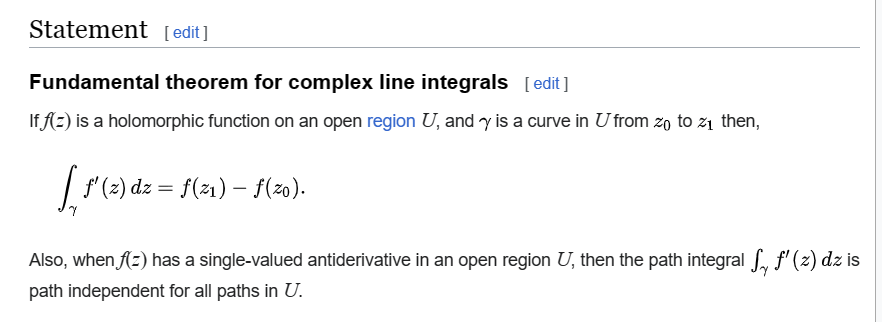
Cauchy's integral theorem

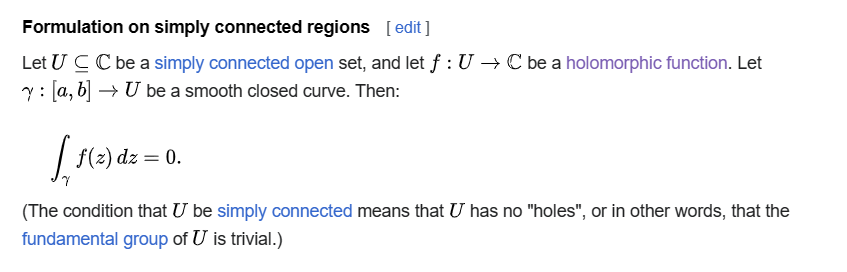
Intro

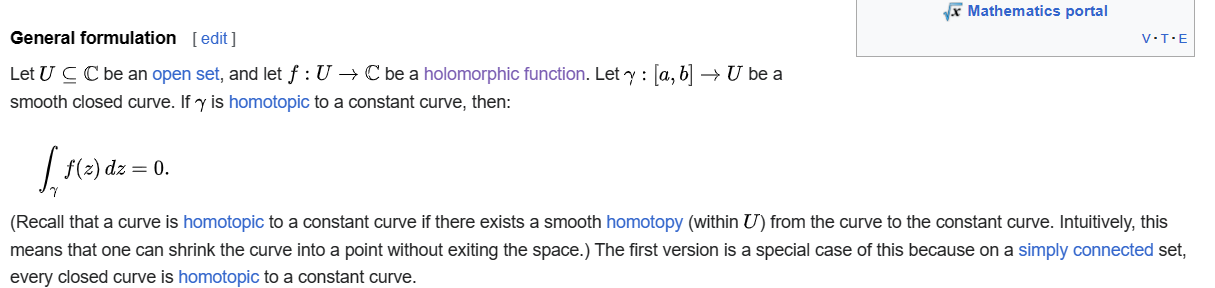
Def



Statement





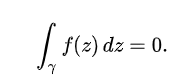


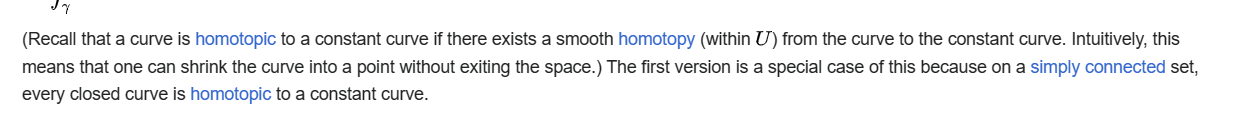
Let belongs to be an open set.

Let be a holomorphic function.

Let be a smooth closed curve.

If is homotopic to a constant value, one has that

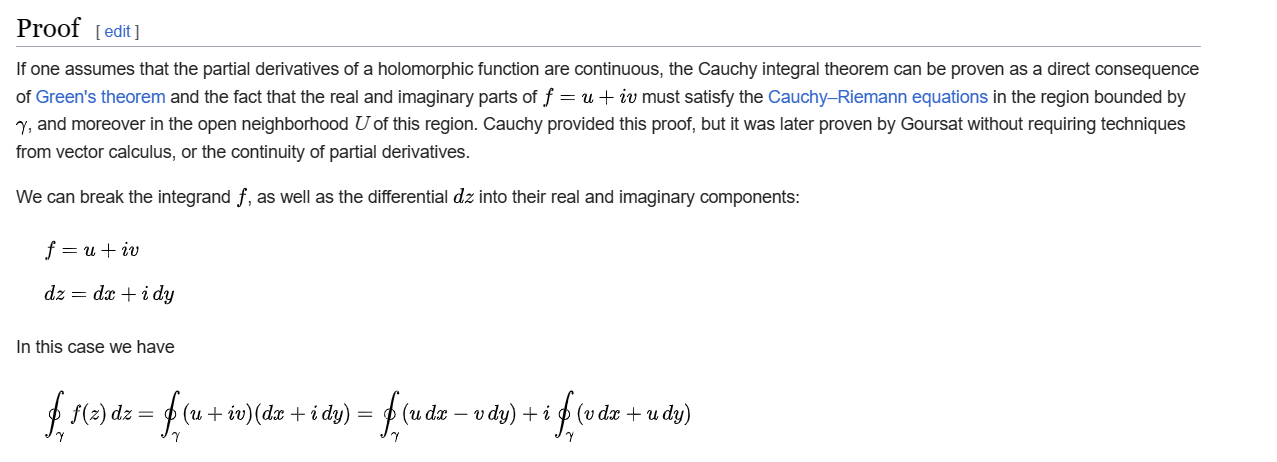


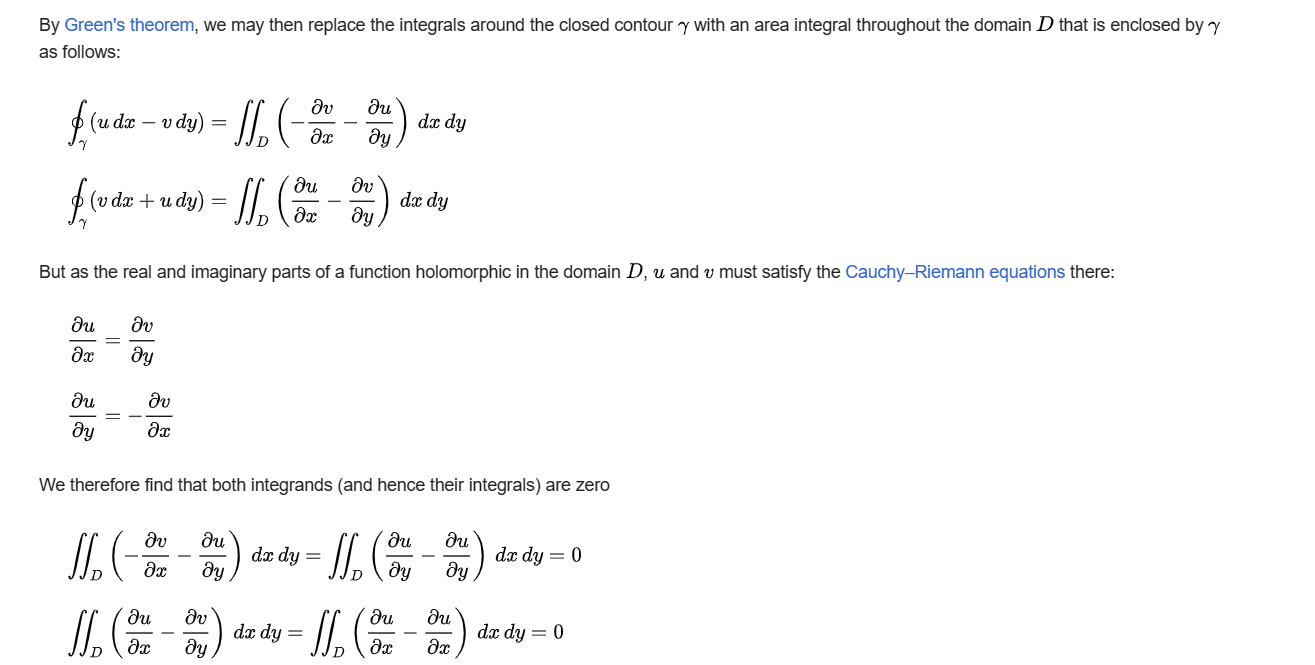


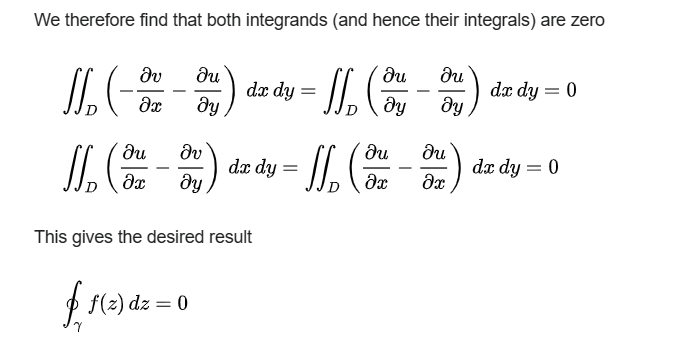
Proof

Method 1:

Method 2:







Ref

[Cauchy's integral theorem - Wikipedia](https://en.wikipedia.org/wiki/Cauchy%27s_integral_theorem)