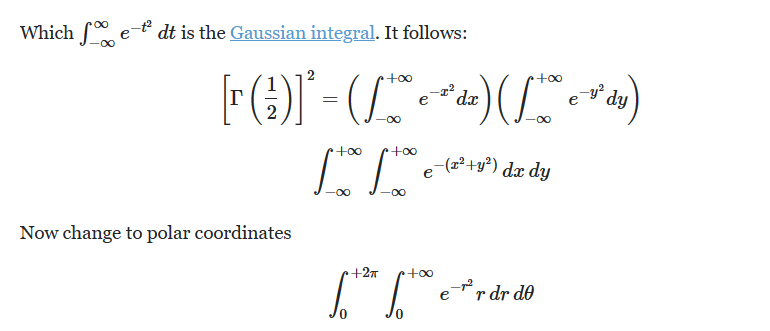
Gamma function

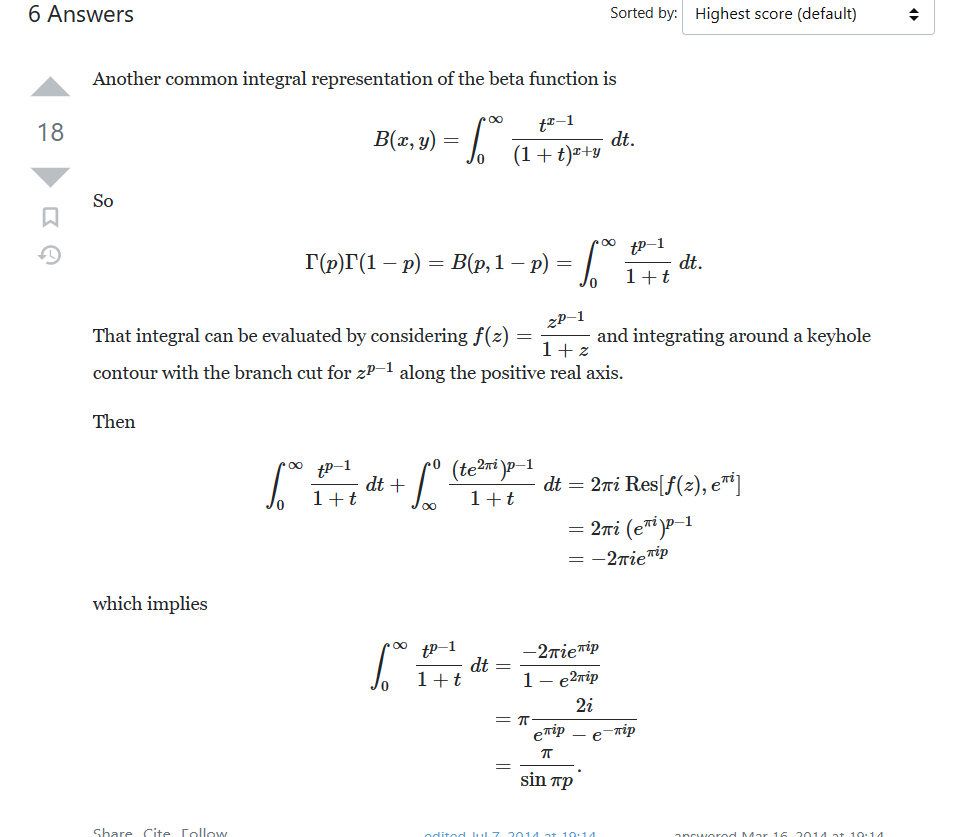
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[Gamma Function of One Half - ProofWiki](https://proofwiki.org/wiki/Gamma_Function_of_One_Half)

[analysis - Why is $\Gamma\left(\frac{1}{2}\right)=\sqrt{\pi}$? - Mathematics Stack Exchange](https://math.stackexchange.com/questions/215352/why-is-gamma-left-frac12-right-sqrt-pi)



[integration - Prove that $\Gamma(p) \cdot \Gamma(1-p)=\frac{\pi}{\sin (p\pi)}$ for $p \in (0,\: 1)$ - Mathematics Stack Exchange](https://math.stackexchange.com/questions/714482/prove-that-gammap-cdot-gamma1-p-frac-pi-sin-p-pi-for-p-in-0)



Ref:

Contain lots of hard identities.

[Gamma Function -- from Wolfram MathWorld](https://mathworld.wolfram.com/GammaFunction.html)

[Gamma function - Wikipedia](https://en.wikipedia.org/wiki/Gamma_function)

One application of gamma function.

[Integral ln gamma from 0 to 1 - YouTube](https://www.youtube.com/watch?v=85WdHgPQWYk&list=PLJb1qAQIrmmDfGsPkrPd2OPyeJe__JeQL&index=54)