

Problems: Extended Stokes' Theorem

Let $\mathbf{F} = \langle 2xz + y, 2yz + 3x, x^2 + y^2 + 5 \rangle$. Use Stokes' theorem to compute $\oint_C \mathbf{F} \cdot d\mathbf{r}$, where C is the curve shown on the surface of the circular cylinder of radius 1.

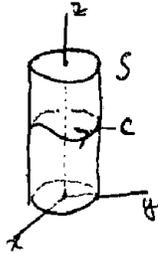


Figure 1: Positively oriented curve around a cylinder.

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18.02SC Multivariable Calculus
Fall 2010

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