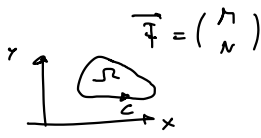


Overview:

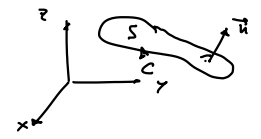
Green, tang.



$$\int_C \vec{F} \cdot d\vec{r} = \iint_S \left( \frac{\partial N}{\partial x} - \frac{\partial M}{\partial y} \right) dA$$



Stokes:



$$\int_C \vec{F} \cdot d\vec{r} = \iint_S (\nabla \times \vec{F}) \cdot d\vec{S}$$

Green, normal:

$$\int_C \vec{F} \cdot d\vec{N} = \iint_S \underbrace{\left( \frac{\partial M}{\partial x} + \frac{\partial N}{\partial y} \right)}_{= \nabla \cdot \vec{F}} dA$$



Divergence thm. (Gauss)

$$\iint_S \vec{F} \cdot d\vec{S} = \iiint_V \nabla \cdot \vec{F} dV$$

