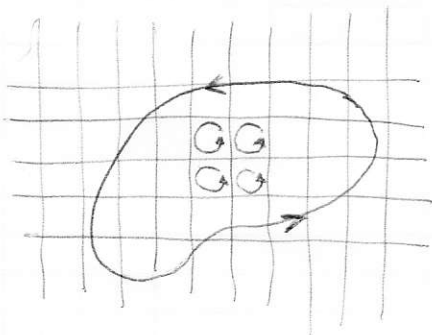


STOKES THEOREM

$$\oint_C \vec{F} \cdot d\vec{c} = \int_S (\nabla \times \vec{F}) \cdot \hat{n} \, ds$$

THE CIRCULATION OF A VECTOR FIELD IS EQUAL TO THE INTEGRAL OF THE NORMAL COMPONENT OF THE CURL OF THAT FIELD OVER THE SURFACE ENCLOSED BY THE PATH.

INFORMAL 'PROOF'



THE CIRCULATION OVER SHARED EDGES IS EQUAL MAGNITUDE AND OPPOSITE SIGN, SO ONLY NON-SHARED EDGES (E.G. THE BOUNDARY) CONTRIBUTES. AND THAT IS THE CIRCULATION ON THE BOUNDARY CURVE.