

Divergence is good for current going round a mesh

Stokes theorem is fluid flows going round a surface. Some sort of flux going round a boundary of a fluid.

This allows you to determine things such as current or contour flow.

This vector fields is electromagnetism and fluid dynamics.

Kronecker delta:

$$\delta_{ij} \triangleq 0 \text{ if } i \neq j \text{ else } 1$$

Levi-Civita symbol:

$$\varepsilon_{ijk} \triangleq 1 \text{ for even permutations of } ijk - 1 \text{ for odd permutations of } ijk \text{ else } 0$$

$$\varepsilon_{123} = \varepsilon_{231} = \varepsilon_{312} = 1$$

$$\varepsilon_{213} = \varepsilon_{132} = \varepsilon_{321} = -1$$

If two or more indices are identical then this goes to zero.

$$\varepsilon_{ijk} = -\varepsilon_{jik}$$

These are Tensors.