Cálculo Vectorial em $\mathbb{R}^3$

$\operatorname{grad}(\nabla)$

$(escalar \longrightarrow vectorial)$

$$\int_A^B \operatorname{grad}\phi \cdot d\mathbf{g} = \phi(B) - \phi(A)$$

$\operatorname{rot}(\nabla\times)$

$(vectorial \longrightarrow vectorial)$

$$\iint_S \operatorname{rot}\mathbf{A}\cdot\mathbf{n} = \oint_{\partial S} \mathbf{A}\cdot d\mathbf{g}$$

$\operatorname{div}(\nabla\cdot)$

$(vectorial \longrightarrow escalar)$

$$\iiint_D \operatorname{div}\mathbf{F} = \oiint_{\partial D} \mathbf{F}\cdot\mathbf{n}$$

Mais Cálculo Vectorial em $\mathbb{R}^3$

$$\operatorname{rot}\operatorname{grad} = 0$$

$$(\operatorname{rot} = 0 + \star \Rightarrow \operatorname{grad})$$

$$\oint \operatorname{grad}\phi \cdot d\mathbf{g} = 0$$

$$\operatorname{div}\operatorname{rot} = 0$$

$$(\operatorname{div} = 0 + \star \Rightarrow \operatorname{rot})$$

$$\oiint \operatorname{rot}\mathbf{A} \cdot \mathbf{n} = 0$$