

$$\oint_a \vec{D} \cdot d\vec{a} = \int_V \rho dV \Leftrightarrow \nabla \cdot \vec{D} = \rho \quad (1)$$

$$\oint_a \vec{B} \cdot d\vec{a} = 0 \quad (2)$$

$$\oint_s \vec{E} \cdot d\vec{s} = -\frac{\partial}{\partial t} \int_a \vec{D} \cdot d\vec{a} \quad (3)$$

$$\oint_s \vec{H} \cdot d\vec{s} = \int_a \vec{J} \cdot d\vec{a} + \frac{\partial}{\partial t} \int_a \vec{D} \cdot d\vec{a} \quad (4)$$