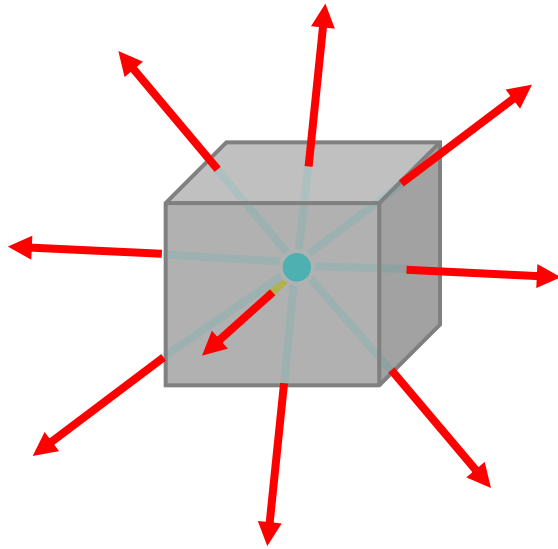


Things to notice about Gauss Law

$$\Phi_S = \int_{\text{closed surface}} \vec{E} \cdot d\vec{A} = \frac{Q_{\text{enclosed}}}{\epsilon_0}$$



If Q_{enclosed} is the same, the flux has to be the same, which means that the integral must yield the same result for any surface.

