CONCEPT: CONDUCTORS AND ELECTRIC FIELDS

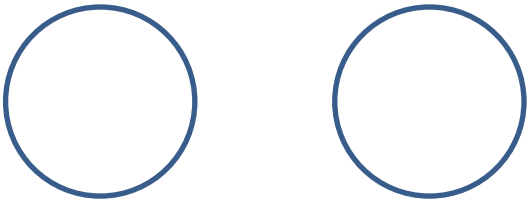
● Electrons are **[ALLOWED | NOT ALLOWED]** to move within conductors.

- Electrons want to get as far apart as possible.

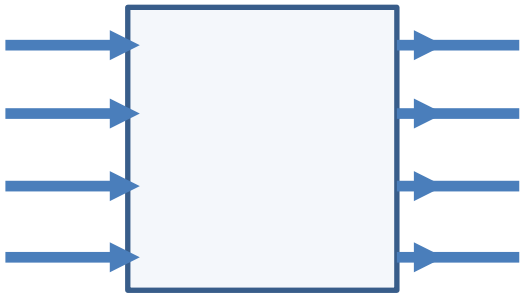
→ Net Electric field **INSIDE** conductor = _____

● CHARGE ARRANGEMENT in conductors:

Net CHARGED Without External Electric Field



UNCHARGED In External Electric Field



→ ***Net*** charges ALWAYS move to and distribute on the _____ of conductors.

● *Outside* a conducting CHARGED sphere with charge **Q**, the electric field is: $\mathbf{E} =$ _____

EXAMPLE: A spherical conductor with a radius of 0.5m has a net charge of 2.0μC. What is the electric field a) 0.8m from the center of the conductor b) 0.4 m from the center of the conductor?