

# Comparison of Electric and Gravitational Fields

## Gravitational Field

- Objects with mass
- Constant of proportionality,  $G$
- Radial vector from center
- Force per unit mass (N/kg)
- $g = F/m = Gm(\text{source})/d^2$
- Always attractive (“toward”) & (+)

## Electric Field

- Objects with charge
- Constant of proportionality,  $k$
- Radial vector from center
- Force per unit charge (N/C)
- $E = F/q = kQ(\text{source})/d^2$
- Attractive (“toward”) (-) or repulsive (“away”) (+)