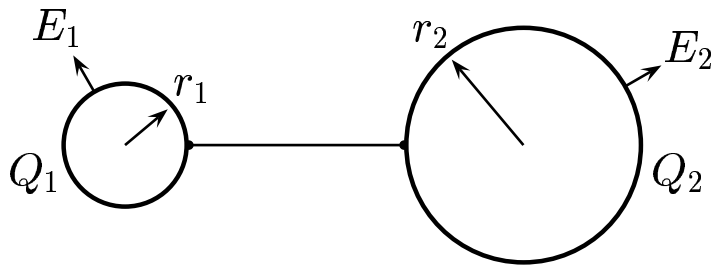


Two conducting spheres are far apart and are connected by a wire.

Assume: $V_1 \approx \frac{k Q_1}{r_1}$, $V_2 \approx \frac{k Q_2}{r_2}$.



Compare the charges on the two spheres; i.e., Q_1 vs Q_2 .

- A) $Q_1 > Q_2$
- B) $Q_1 = Q_2$
- C) $Q_1 < Q_2$

$$V_1 = \frac{k Q_1}{r_1} = V_2 = \frac{k Q_2}{r_2}. \text{ So } \frac{Q_1}{Q_2} = \frac{r_1}{r_2} < 1, \text{ or } Q_1 < Q_2.$$

Answer C.

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