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

Assume: \( V_1 \approx \frac{kQ_1}{r_1}, \quad V_2 \approx \frac{kQ_2}{r_2}. \)

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) \( Q_1 < Q_2 \)
\[ V_1 = \frac{kQ_1}{r_1} = V_2 = \frac{kQ_2}{r_2}. \] So \( \frac{Q_1}{Q_2} = \frac{r_1}{r_2} < 1, \) or \( Q_1 < Q_2. \)

Answer C.

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