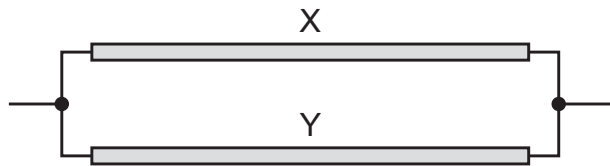


- 36** Two identical wires X and Y, each of length  $L$  and radius  $r$ , are connected in parallel as shown.



The total resistance of this combination is  $R_1$ .

Wire X is replaced with a wire of the same material with length  $L$  and radius  $2r$ .

The total resistance of the new combination is  $R_2$ .

What is the ratio  $\frac{R_1}{R_2}$ ?

**A**  $\frac{2}{5}$

**B**  $\frac{2}{3}$

**C**  $\frac{3}{2}$

**D**  $\frac{5}{2}$