

- 18** Two wires, X and Y, are made of different materials, but have the same resistance.

X is twice as long as Y but has half the diameter of Y.

What is the ratio $\frac{\text{resistivity of material from which wire X is made}}{\text{resistivity of material from which wire Y is made}}$?

A $\frac{1}{8}$

B $\frac{1}{4}$

C 4

D 8