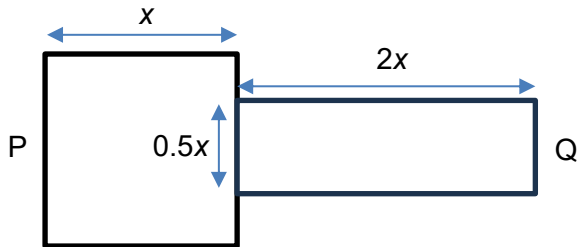


- 21** A thin square sheet of metal of uniform thickness and of side  $x$  has a resistance of  $4.0\ \Omega$  measured between opposite edges. It is connected to another sheet of the same metal of the same thickness but of length  $2x$  and width  $0.5x$ .



What is the resistance between edges P and Q?

- A**  $8\ \Omega$                       **B**  $12\ \Omega$                       **C**  $16\ \Omega$                       **D**  $20\ \Omega$
- 22** Two parallel conductors carry equal sinusoidal alternating currents which are in phase. The