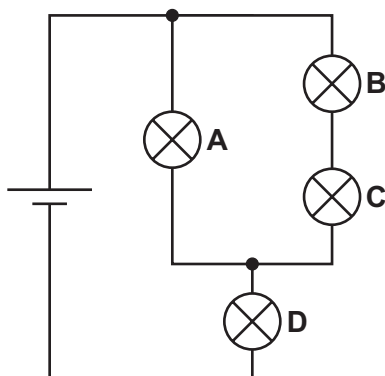
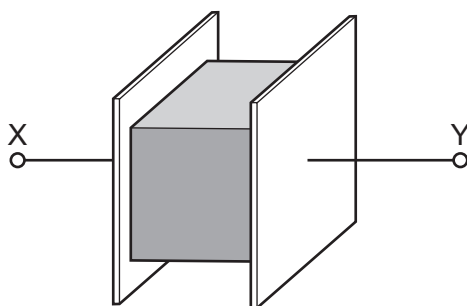


**32** A student builds the circuit shown. All the lamps are identical.

Which lamp dissipates the most power?



**33** The resistance of a metal cube is measured by placing it between two parallel plates, as shown.



The cube has volume  $V$  and is made of a material with resistivity  $\rho$ . The connections to the cube have negligible resistance.

Which expression gives the electrical resistance of the metal cube between X and Y?

**A**  $\rho V^{\frac{1}{3}}$

**B**  $\rho V^{\frac{2}{3}}$

**C**  $\frac{\rho}{V^{\frac{1}{3}}}$

**D**  $\frac{\rho}{V^{\frac{2}{3}}}$