

- 33** A resistor has resistance  $R$ . When the potential difference (p.d.) across the resistor is  $V$ , the current in the resistor is  $I$ . The power dissipated in the resistor is  $P$ . Work  $W$  is done when charge  $Q$  flows through the resistor.

What is **not** a valid relationship between these variables?

**A**  $I = \frac{P}{V}$

**B**  $Q = \frac{W}{V}$

**C**  $R = \frac{P}{I^2}$

**D**  $R = \frac{V}{P}$