

33 The potential difference across a resistor is 12V. The current in the resistor is 2.0A.

A charge of 4.0C passes through the resistor.

What is the energy transferred in the resistor and the time taken for the charge to pass through the resistor?

| | energy / J | time / s |
|----------|------------|----------|
| A | 3.0 | 2.0 |
| B | 3.0 | 8.0 |
| C | 48 | 2.0 |
| D | 48 | 8.0 |

34 A coil contains N turns of insulated copper wire wound on to a cylindrical iron core of diameter D .