

- 17 A wire of resistance  $R$  has a length  $l$  and a circular cross-section of radius  $r$ .

Which wire, made of the same material, has a resistance  $\frac{R}{2}$ ?

|          | length | radius        |
|----------|--------|---------------|
| <b>A</b> | $l$    | $\frac{r}{2}$ |
| <b>B</b> | $l$    | $2r$          |
| <b>C</b> | $2l$   | $\frac{r}{2}$ |
| <b>D</b> | $2l$   | $2r$          |

- 18 A car has a 12 V battery. When the engine is started, the current in the starter motor circuit is