

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

Which size 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>	$2l$	$2r$

**21** The  $I-V$  characteristics of four different conductors are shown in the graph