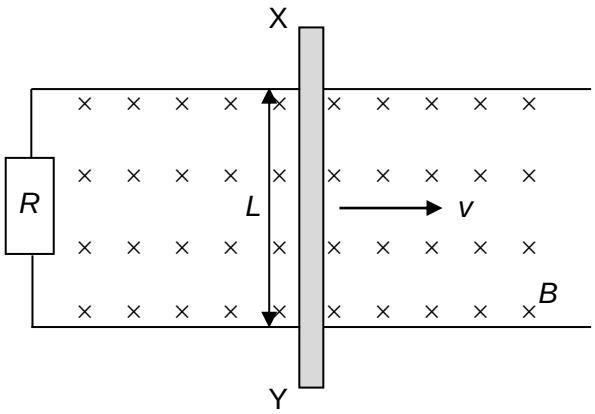
27 A metal rod slides along a wire frame, with negligible resistance, to the right with a speed of $v = 2.0\ \text{m s}^{-1}$ across a magnetic field B perpendicular to the plane of the frame as shown in the figure below.



If $L = 0.80$ m, $R = 6.0\ \Omega$ and $B = 3.5$ T, which end of the rod, X or Y, is at a higher potential and what is the power dissipated by R?

	End at higher potential	Power dissipated by R
A	X	5.2 W
B	X	5.6 W
C	Y	5.2 W
D	Y	5.6 W