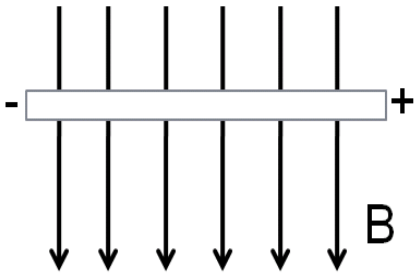
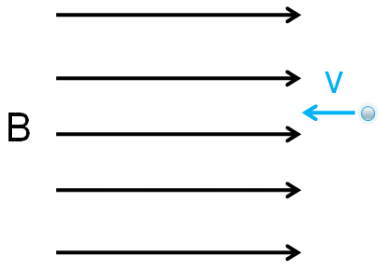
Note Title 29/05/2011

A 0.25 m long wire carrying a current of 1.2 A passes through a 2.0 T magnetic field. Find the magnitude and direction of the force on the wire.



What is the direction of the force acting on the electron shown?



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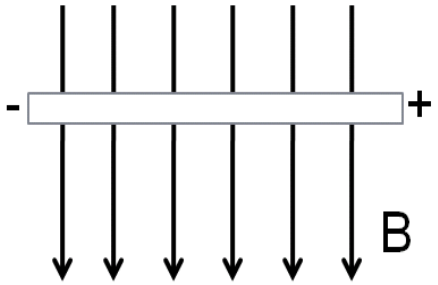


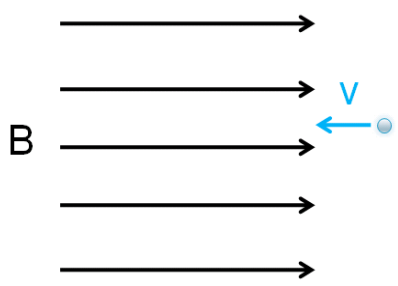
$F_m = BIl$ ✓

$= (2.0\,T)(1.2\,A)(0.25\,m)$

$= 0.60\,N$ ✓

out of page ✓

What is the direction of the force acting on the electron shown?



$v \parallel B$

$\therefore F_m = 0$ ✓✓