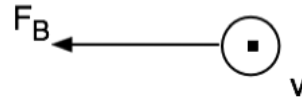
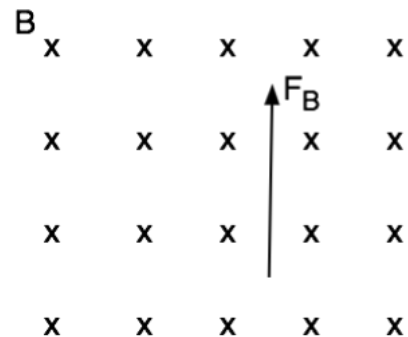


### Quiz 21.1A

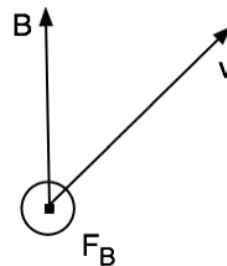
a) A positively charged particle moving out of the page as shown experiences a magnetic force directed to the left. Indicate the direction of the magnetic field in the diagram.



b) A negatively charged particle is immersed in a magnetic field pointing into the page as shown, and it experiences a magnetic force directed toward the top of the page. Indicate the direction of the particle's velocity in the diagram.



c) A particle moving through a uniform magnetic field as shown below experiences a magnetic force directed out of the page. Indicate in the diagram whether this particle has a positive or negative charge.



d) A particle with a speed of  $4.40 \times 10^6$  m/s and a charge of  $+235 \mu\text{C}$  enters a region of uniform magnetic field with a magnitude of  $75.0 \mu\text{T}$  directed toward the top of the page as shown. What is the magnitude and direction of the magnetic force exerted on this charged particle?

