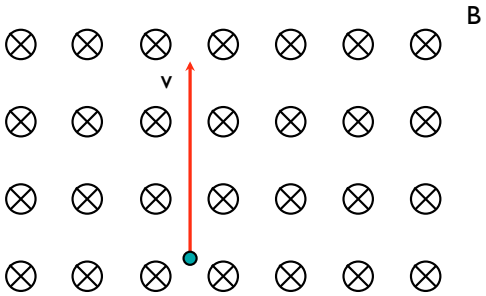
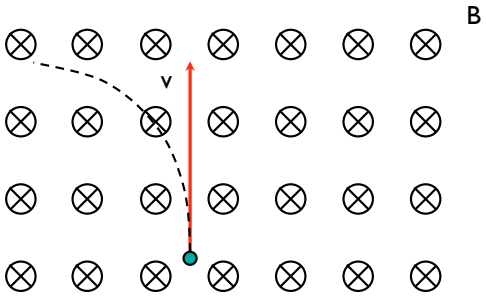
Problem 19.2a

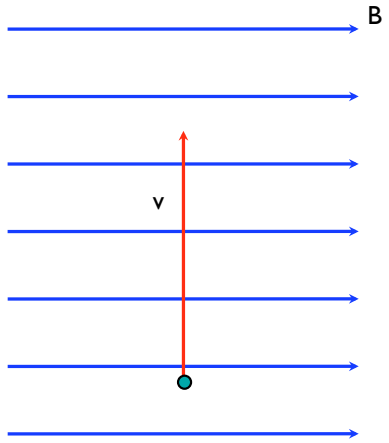


Problem 19.2a

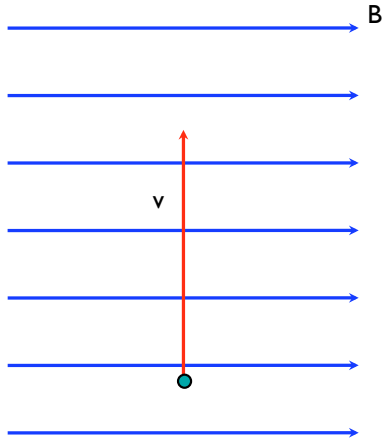


Assuming the charge is positive and is positioned as shown, the force it will feel will be toward the left. Once it responds to that force, the magnitude of its velocity will remain constant but its path will veer along a constant radius circular path as shown with the dotted line. At any point along that line, it is true that the magnetic force acting on it will have a direction defined by the cross product relationship $\mathbf{v}\times\mathbf{B}$. If it was negative, it would move in the opposite direction.

Problem 19.2b

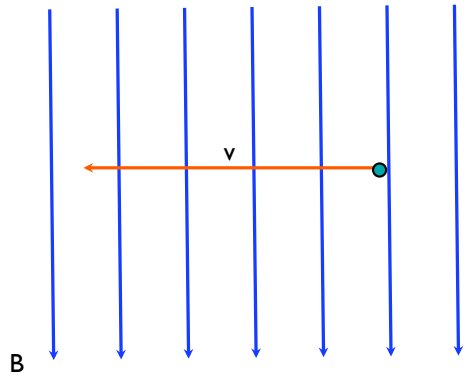


Problem 19.2b

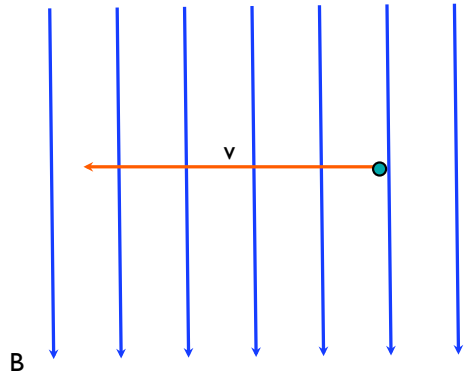


Assuming the charge is positive and positioned as shown, the force it will feel will be inward into the page. If it's negative, the force will be out of the page.

Problem 19.2c

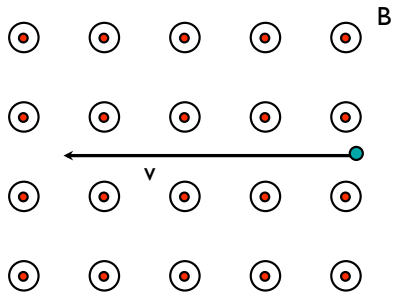


Problem 19.2c

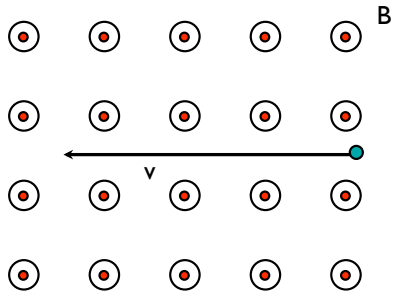


Assuming the charge is positive and positioned as shown, the force it will feel will be outward out of the page. If it is negative it will be into the page.

Problem 19.2d

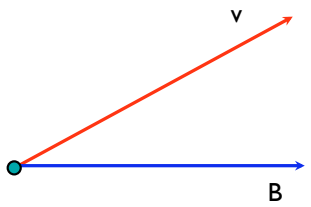


Problem 19.2d

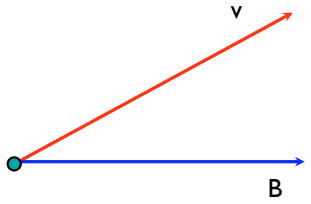


Assuming the charge is positive and positioned as shown, the force it will feel will be upward toward the top of the page. If it is negative, it will be toward the bottom of the page.

Problem 19.2e

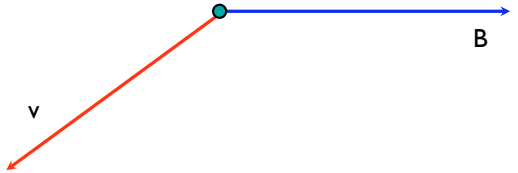


Problem 19.2e

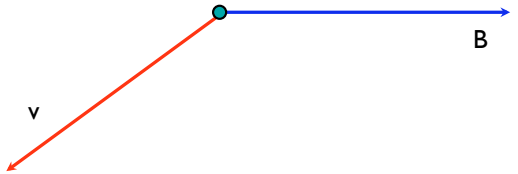


Assuming the charge is positive and positioned as shown, the force it will feel will be into the page. If it is negative it will be out of the page.

Problem 19.2f



Problem 19.2f



Assuming the charge is positive and positioned as shown, the force it will feel will be out of the page. If it is negative it will be into the page.