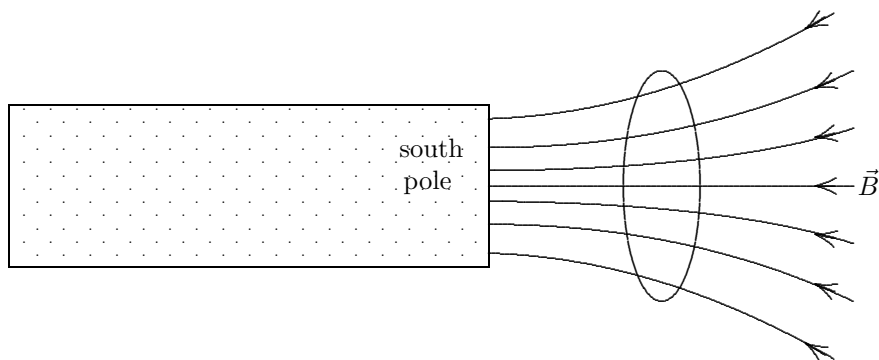


12. (a) A sketch of the field lines (due to the presence of the bar magnet) in the vicinity of the loop is shown below:



- (b) The primary conclusion of §32-6 is two-fold: $\vec{\mu}$ is opposite to \vec{B} , and the effect of \vec{F} is to move the material towards regions of smaller $|\vec{B}|$ values. The direction of the magnetic moment vector (of our loop) is toward the left in our sketch.
- (c) See our comments in part (b). Since the size of $|\vec{B}|$ relates to the “crowdedness” of the field lines, we see that \vec{F} is towards the right in our sketch.