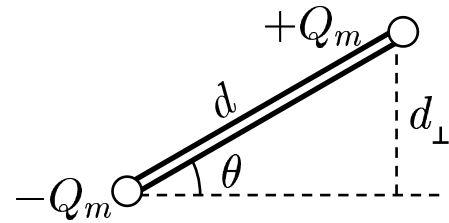
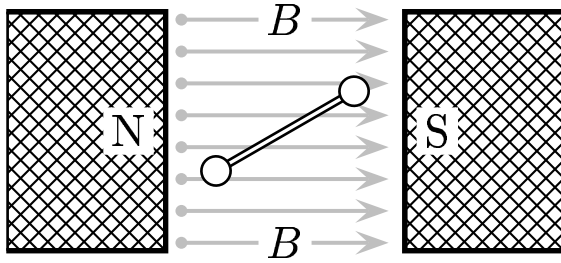


Consider a magnetic dipole placed in a uniform magnetic field  $\vec{B}$ , where  $Q_m$  is a magnetic monopole.

The force on a magnetic monopole  $Q_m$  in a magnetic field  $\vec{B}$  is  $F = Q_m B$  (similar to the electric field where  $F = Q_e E$ ).



Determine the net force  $F$  on the magnetic dipole.

- A)  $F = 2 Q_m B$
- B)  $F = Q_m B$
- C)  $F = 0$
- D)  $F = 3 Q_m B$
- E)  $F = 4 Q_m B$

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Forces on  $+Q_m$  and  $-Q_m$  are equal in magnitude and opposite in sign.  
 $F_{net} = F_+ + F_- = 0$ .  
Answer C.