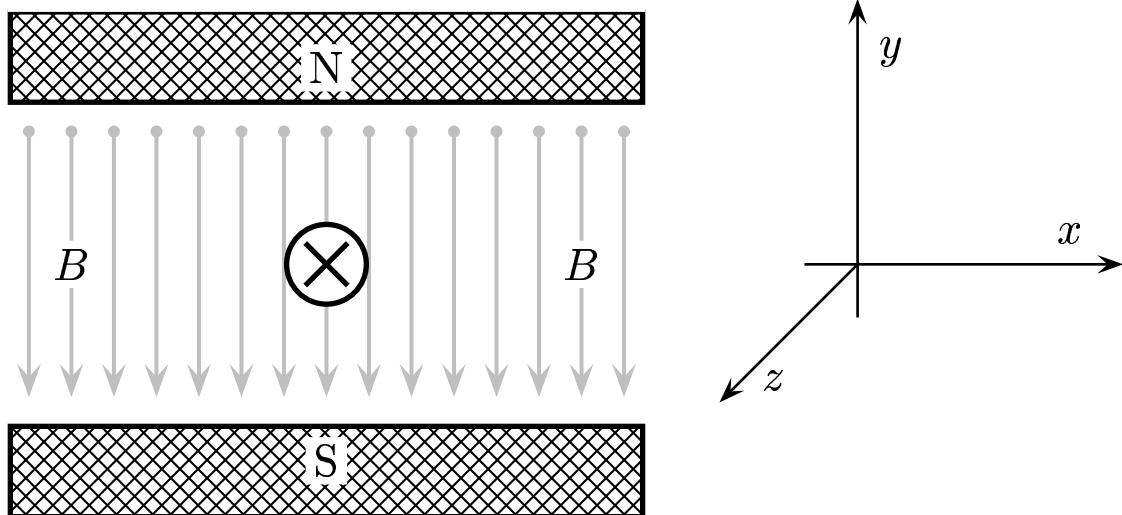


Given: An external magnetic field \vec{B} which is downward \downarrow , $(-\hat{j})$.
 A current I which flows into the page \otimes , $(-\hat{k})$.



Determine the direction of force.

- A) The direction of force is $+\hat{i}$.
- B) The direction of force is $-\hat{i}$.
- C) The direction of force is $+\hat{j}$.
- D) The direction of force is $-\hat{j}$.

Here we want to determine the direction of cross-product $\Delta\vec{F} = I \Delta\vec{\ell} \times$
B. From the directions given, we have $(-\hat{k}) \times (-\hat{j}) = -\hat{i}$.
 Answer **B**.