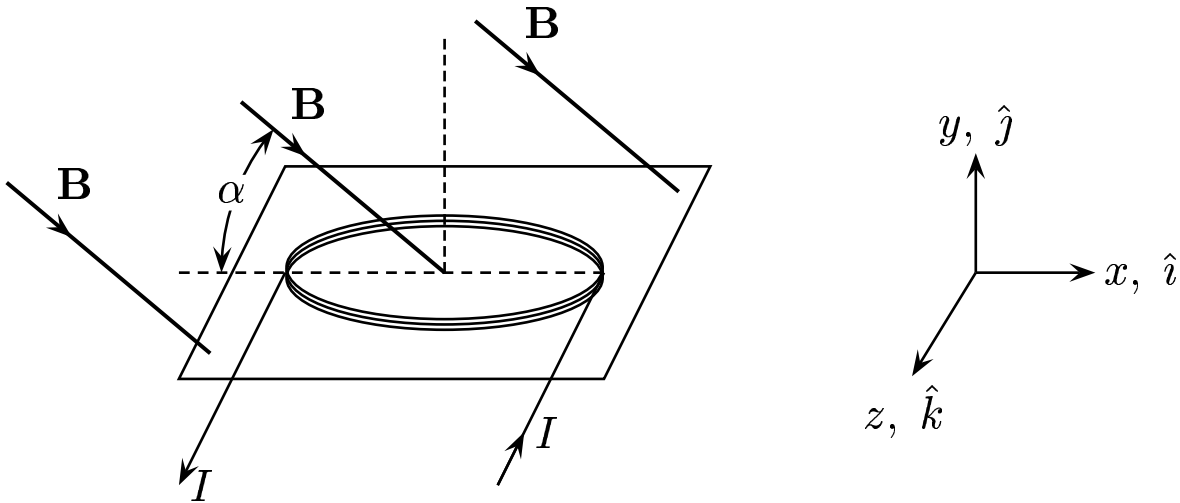


A coil has N turns with radius r and current I . \vec{B} is directed in the manner as shown. \vec{B} is uniformly distributed over the plan of the coil.



Find the direction of torque, τ .

- A) The direction of τ is \hat{i} .
- B) The direction of τ is $-\hat{i}$.
- C) The direction of τ is \hat{k} .
- D) The direction of τ is $-\hat{k}$.

Right-hand-rule(RHR) #3 implies $\vec{\mu}$ is pointing upward. $\vec{\mu} \times \vec{B}$ is pointing along $-\hat{k}$.
 Answer D.