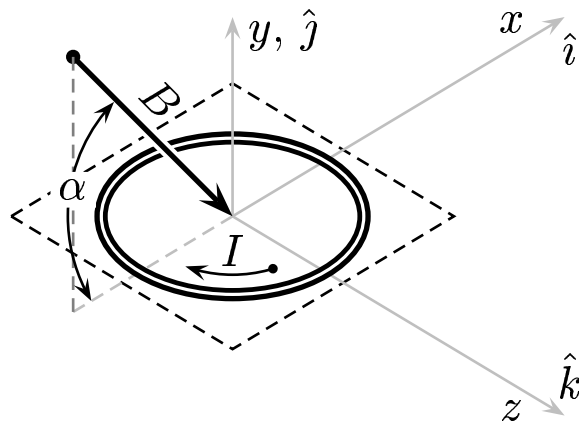
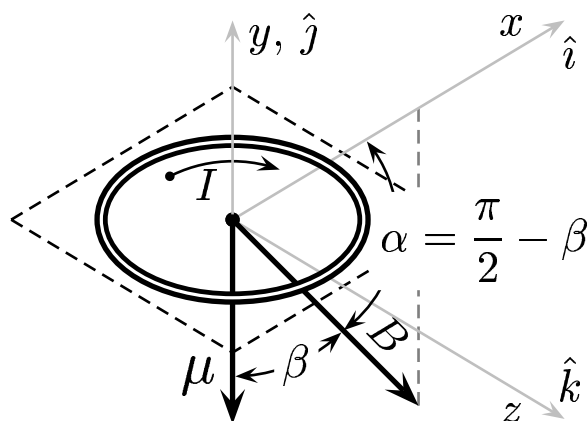


The angle between the \vec{B} field and the plane of the loop is α .



Determine the direction of μ_{loop} and the angle between μ_{loop} and \vec{B} .

- A) The direction of μ_{loop} is \downarrow and the angle between μ_{loop} and \vec{B} is $\frac{\pi}{2} - \alpha$.
- B) The direction of μ_{loop} is \uparrow and the angle between μ_{loop} and \vec{B} is $\frac{\pi}{2} - \alpha$.
- C) The direction of μ_{loop} is \downarrow and the angle between μ_{loop} and \vec{B} is $\frac{\pi}{2} + \alpha$.
- D) The direction of μ_{loop} is \uparrow and the angle between μ_{loop} and \vec{B} is $\frac{\pi}{2} + \alpha$.



Right-hand-rule (RHR) #3 implies μ_{loop} is pointing downward and \vec{B} is in the xy -plane. In turn the angle β between μ_{loop} and \vec{B} is $\beta = \frac{\pi}{2} - \alpha$.

Answer **A**.