Question #273

I hold a bicycle wheel gyroscope as seen in the photograph at the left below and rotate it counterclockwise as viewed from above, as seen in an mpeg video by clicking your mouse on the photograph. This is not very interesting because the bicycle wheel is not spinning, but it might get more interesting if we were to spin the bicycle wheel before rotating it.



Suppose that we were to spin the wheel so that the edge closest to the camera is moving downward and the edge closest to my body is moving upward, as seen by clicking your mouse on the photograph below.



Now suppose that we spin the bicycle wheel as seen immediately above and then rotate the (spinning) wheel counterclockwise as seen from above. What will the wheel do?

- (a) It will tend to rotate with the end toward the camera moving up.
- (b) It will tend to rotate with the end toward the camera moving down.
- (c) The spinning will prevent the wheel from rotating.
- (d) Rotating the wheel will cause it to stop spinning.
- (e) Say what? Why would it do anything except continue to spin?

Click here for <u>Answer #273</u> after February 12, 2007.

Question of the Week

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For questions and comments regarding the *Question of the Week* contact <u>Dr. Richard E. Berg</u> by e-mail or using phone number or regular mail address given on the <u>Lecture-Demonstration Home Page</u>.