Question #365

This week's question features an curious "bottle puzzle" which is pictured below. Inside the bottle is the peculiar wooden cross and ball, which are free to move about inside.

The purpose of the puzzle is to position the ball in the neck of the bottle, in the position shown below. This is rather harder that it seems at first glance, as can be witnessed firsthand by viewing the video below.

Alternate high-res version.

HINT: In order to start the discussion, we offer a "suggested starting position" from which to work from. Click the photograph below to see how the ball is setup into this position.

Alternate high-res version.

Question: From the given starting position, what is the best way of moving the ball into the neck of the bottle?

Again, despite the "fun-natured" spirit of the puzzle, you must justify your choice by describing the concepts of physics relevant to your solution.

- (a) Tilt the bottle first to the left, then quickly to the right.
- (b) Tilt the bottle first to the right, then quickly to the left.
- (c) Spin the bottle clockwise.
- (d) Spin the bottle counterclockwise.
- (e) Other (you must explain).

Click here for Answer #365 after March 24, 2010.

Question of the Week

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