Answer #88

The answer is (a): the ball will roll straight in the stationary frame of reference, even if the platform is rotating. This may be seen on an mpeg video by clicking your mouse on the photograph below.

If there is negligible friction between the ball and the rotating platform, the ball should not experience any force in the horizontal frame, so it should go in a straight line when viewed in the fixed frame.

This is not quite the case here, and if you look carefully you will notice that the ball curves very slightly to its left in the fixed frame. However, it is straight when compared with its path when viewed in the rotating frame.

Archive 5

Question of the Week

Outreach Index Page

Lecture-Demonstration Home Page

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.