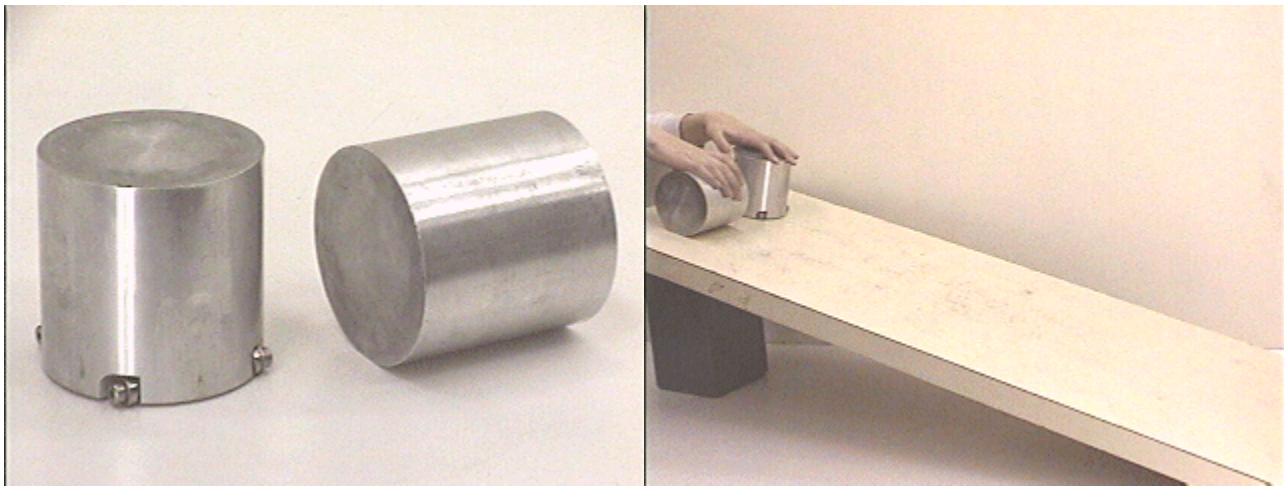
Question #11

Which is faster, rolling or sliding? Consider the two almost identical aluminum cylinders in the photograph at the left below. One rolls without sliding, while the other slides without friction (to a good approximation) on four tiny ball bearings mounted at one end of the cylinder.



Suppose that they are started simultaneously from rest at the top end of an inclined plane, one rolling down the incline and the other sliding without friction, as shown in the photograph at the right above.

As they race down the incline, what will happen?

- (a) The rolling cylinder will get to the bottom of the incline first.
- (b) The sliding cylinder will get to the bottom of the incline first.
- (c) They will get to the bottom at the same time; the race will end in a tie.

Click here for Answer #11 after May 8, 2000.

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.