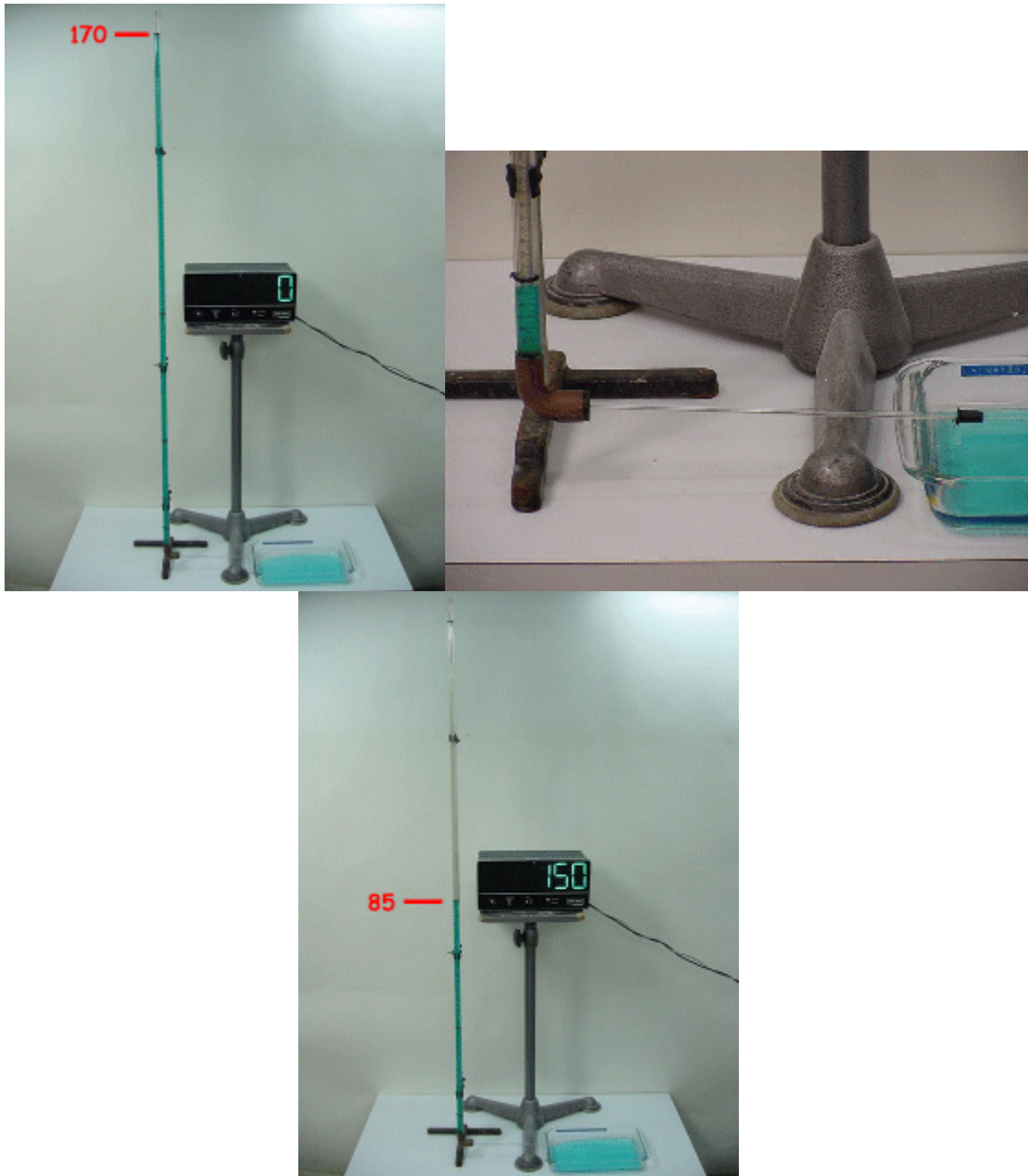# Question #195

A vertical tube is filled to 170 cm with blue water, as seen in the photograph at the left below. The photograph at the center below shows the bottom end of the tube, connected to a capillary tube mounted horizontally as seen. A cap covers the end of the tube; when the cap is removed the water will begin to flow out of the tube into the cake pan collector.

The timer, initially set to zero in the picture at the left, is started at the same time the cap is removed and the water begins to flow out of the tube. The time taken for half of the water to flow out of the tube (the level has gone down from 170 cm to 85 cm) is about 150 seconds, as read on the timer in the photograph at the right.

The question this week regards how the water will continue to flow out of the tube as time continues to pass. For example, what will happen in another approximately 150 seconds?

- (a) All the water will be gone before an additional 150 seconds passes.
- (b) All the water will be gone just as an additional 150 seconds is reached.
- (c) Almost, but not quite, all of the water will be gone after an additional 150 seconds.
- (d) Only about half of the remaining water will be gone after an additional 150 seconds.
- (e) The water will stop flowing shortly after the initial 150 seconds.

Click here for Answer #195 after October 25, 2004.

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.