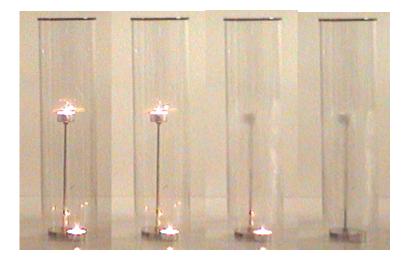
## **Answer #177**

The answer is (a): The top candle will go out, then the bottom candle, as can be seen in the sequence of photographs below.



The photograph at the left was taken immediately after the plastic tube was placed over the candles. The photograph at the left center, taken about 1 minute after the tube was placed over the candles, shows the two candles still happily burning. The photograph at the right center was taken after about 1.5 minutes, just after the upper candle went out. The photograph at the right was taken after 2.5 minutes, just after the bottom candle went out.

As the candles burn, the hot gases composing the products of combustion will be less dense than the cooler original air, and will rise to the top of the tube. The upper candle will therefore be extinguished sooner than the lower one.

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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>.