Question #354

The beloved sand dish is back for another week of toil and trouble. As a follow up to Question #353, the dish is accompanied by a rather curious looking hose, with a small slit cut into the top.

The hose, as seen in the upper left, is sealed on one end using a metal ball as a stopper. The other end is open, and a blast of air can be blown from the open end to the slit. The hose will be placed carefully in the dish and then buried with sand, with the slit facing up, as seen in the upper right.

Question: Which of the following accurately describes how the sand will form when air is blown through the slit?

(a) (b)

(c)

(d)

- (a) Since the air is being blown upwards, sand will be pushed up to form a mound on the surface.
- (b) A circular ring will appear on the surface and the sand will have caved in slightly.
- (c) Tiny pockets of air will make their way through the tightly packed sand and form little, circular imprints on the surface.
- (d) The surface will appear to have imploded inwards, in the shape of a circle above the slit.

Click here for Answer #354 after October 19, 2009.

Question of the Week

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For questions and comments regarding the *Question of the Week* contact
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given on the Lecture-Demonstration Home Page.