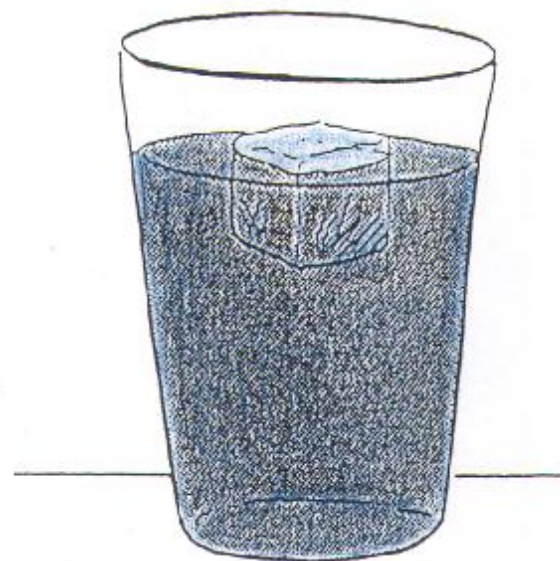


## NEXT-TIME QUESTION

An astronaut on Earth notes that an ice cube in her soft drink floats with  $9/10$  its volume submerged. If she were instead in a lunar module parked on the Moon, the ice in the same soft drink would float with

- a) less than  $9/10$  submerged.
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Answer: b,  $9/10$  submerged

How much a floating object extends below and above the liquid depends on the weight of the object and the weight of the displaced fluid, both of which are proportional to  $g$ . Lower  $g$  or increase it; the proportion floating above and below is unchanged.

So in tomorrow's swimming pools in lunar hotels, you'll be able to jump higher on a diving board, ripples and waves will travel slower on the water surface, but you'll float with the same portion of your body above water!

Would the ice cube float the same inside an accelerating elevator?

