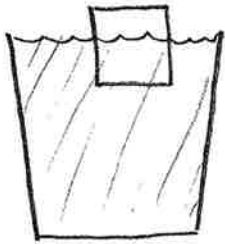


Floating ice cube

ASG v2 EX 15.2



When the ice cube is solid, the fraction of its volume submerged is just ρ_i / ρ_w , where ρ_i is the density of ice and ρ_w is the density of water.

When it melts, the density of the ice increases by just enough so that it occupies the same volume as the fraction that was initially submerged. Therefore the water level remains the same.

If the ice cube was in alcohol, it would not float, but would sink, since its density is greater than that of alcohol. When it melts, then, the alcohol level will fall.