A block of wood floats on water. A layer of oil is now poured on top of the water to a depth that more than covers the block, as shown in Figure 15-30.


Figure 15-30

(a) Is the volume of wood submerged in water greater than, less than, or the same as before?


1

more wood submerged in water than before
less wood submerged in water than before
same amount of wood is submerged in water as before

(b) If 75% of the wood is submerged in water before the oil is added, find the fraction submerged when oil with a density of 731 kg/m3 covers the block. (Do not neglect the buoyant force of air before the oil is added.)
2%