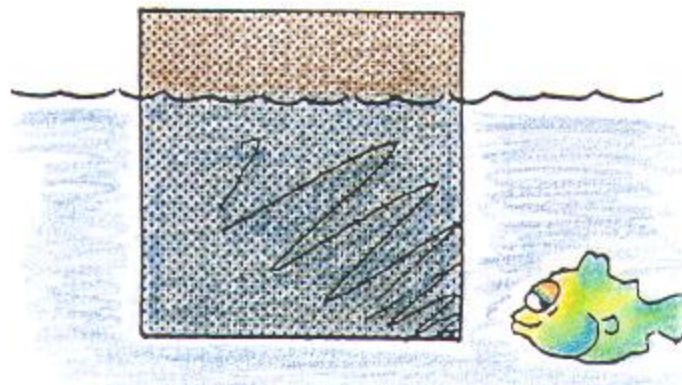


NEXT-TIME QUESTION

The density of the block of wood floating in water is

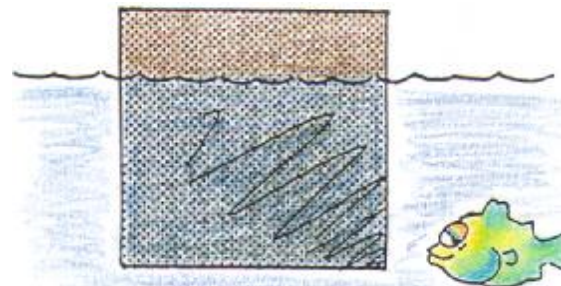


- a) greater than the density of water.
- b) equal to the density of water.
- c) less than half that of water.
- d) more than half the density of water.
- e) ... not enough information is given.

NEXT-TIME QUESTION

The density of the block of wood floating in water is

- a) greater than the density of water.
- b) equal to the density of water.
- c) less than half that of water.
- d) more than half the density of water.
- e) ... not enough information is given.



Answer: d, more than half the density of water.

A very-low density object, like an inflated balloon, floats high on the water, and a denser object like a piece of hardwood, floats lower into the water. An object half as dense as water floats halfway into the water (because it weighs as much as half its volume of water). Wood that floats $3/4$ submerged, is $3/4$ as dense as water—like the block in question—more than half the density of water.

The density of the block compared with the density of water is the same as the fraction of the block below the water line.

