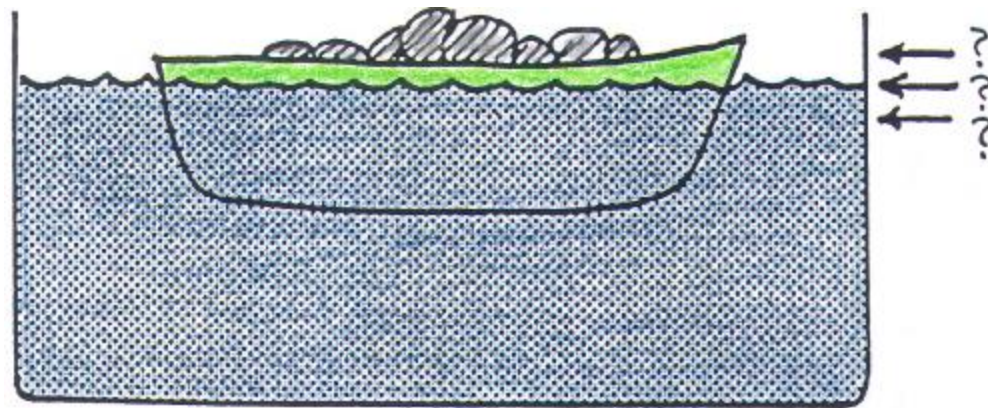


NEXT-TIME QUESTION

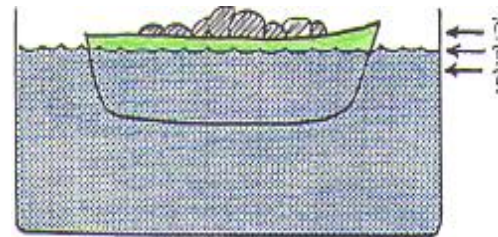
CONCEPTUAL Physics

Consider a boat loaded with scrap iron in a swimming pool. If the iron is thrown overboard into the pool, will the water level at the edge of the pool rise, fall, or remain unchanged?



NEXT-TIME QUESTION

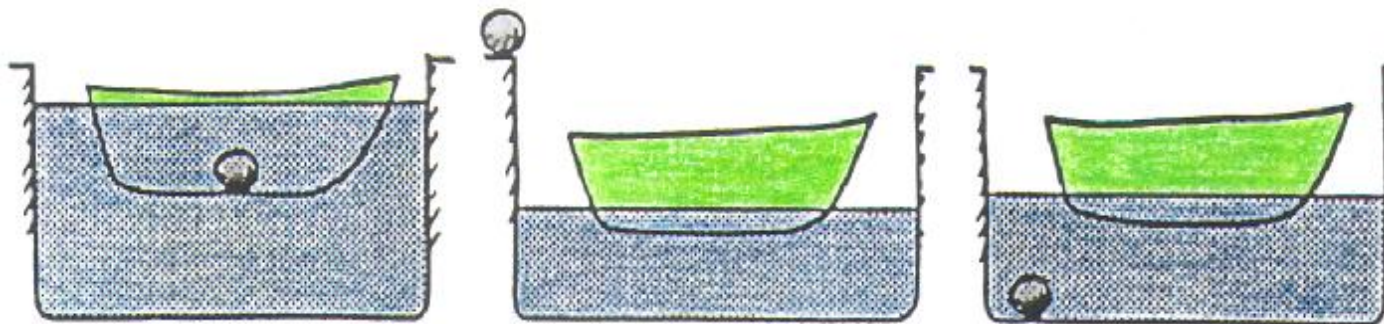
Consider a boat loaded with scrap iron in a swimming pool. If the iron is thrown overboard into the pool, will the water level at the edge of the pool rise, fall, or remain unchanged?



Answer: fall

The water level at the side of the pool will fall, because the iron will displace less water submerged than when floating. When floating it displaces its weight of water (a lot!)—when submerged it displaces only its volume (less, because iron is more dense than water).

The more exaggerated view shows cases for a very heavy but small cannonball—note the differences in water levels.



Hewitt
Draw it!