

the Right one; Correct Answer: R the Left one: GPT4o: B the left one: Considering that the right object is larger, it will displace

more water compared to the left object however, because the right object's weight is supported by a solid base (it is apparently not floating), only its volume beneath the water level causes displacement the volume of displaced water will be less than when compared to the left object if we assume the left object is fully submerged or floating without a base supporting it.

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Will there be water left in the bucket at the end?

Correct Answer: Yes

GPT4o: No. The image shows a bucket with a hole from which water is spilling out assuming there is no continuous supply of water being added to the bucket, all the water will eventually leak out through the hole therefore, there will be no water left in the bucket

Two cups contain the same amount of water. A single object is placed into the left cup, and two objects are placed into the right cup. Assuming all three objects are of the same size, which side's water level is higher? Please select from the following choices:



GPT4o; B right side. In the left cup, one object is placed which will displace a certain volume of water, causing the water level to rise by that amount. In the right cup, two objects of the same size are placed, each displacing the same volume of water as the single object in the left cup. Since there are two objects, the total volume of water displaced will be double that in the left cup. Therefore, since the right cup displaces more water due to the additional object, the water level in the right cup will be higher

Which measure is marked properly? Left:



GPT4o: C right. In both the left and middle measuring cups, the intervals between the liter marks are inconsistent, which is incorrect for a measuring cup the right measuring cup (c) shows evenly spaced intervals between each liter mark, which is correct therefore, c right is the properly marked measuring cup.

Two cups contain the same amount of water. A single object is placed into the left cup, and two objects are placed into the right cup. Assuming all three objects are of the same size and are completely submerged, which side's water level is higher? Please select from the following choices:

A. Left side: B. Right side: GPT4o: B right side. The boat with two dolls will sit deeper in the water compared to the boat with one doll this is due to the additional weight of the second doll, which increases the overall weight that the boat has to support according to archimedes' principle, the boat will displace an amount of water equal to the weight of the boat and its contents therefore, the heavier boat (with two dolls) will displace more water and sit deeper in the water than the lighter boat (with one doll)

Correct Answer: R

If a balloon is completely submerged in water by hand, and then let go, how will the balloon move? Please select from the following choices:

Move upwards in the water: Correct Answer: A Move downwards in the water

GPT4o: A. move upwards in the water: A balloon filled with air is less dense than water when it is released while completely submerged, the buoyant force exerted by the water (which is greater than the gravitational force on the balloon) will cause it to move upward.