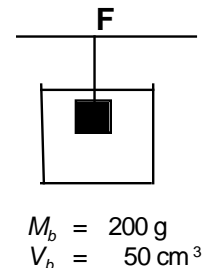
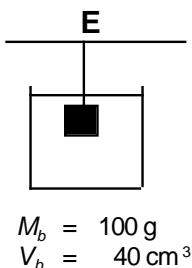
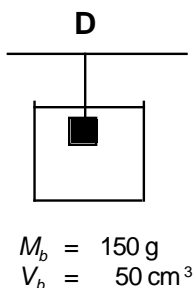
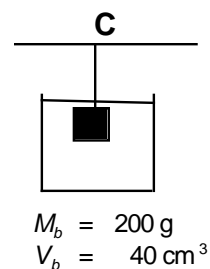
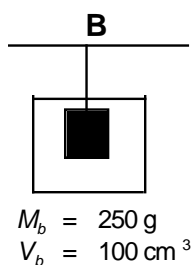
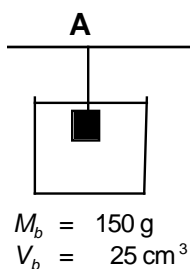


Blocks Suspended in Water—String Tension ¹⁰³

Shown below are six containers that have the same volume of water in them. Blocks of various solids are suspended in the containers by being hung from a supporting rod. The blocks vary in both size and mass. The blocks are made of different materials, but all of the blocks would sink if the strings were cut. Specific values for the masses labeled as M_b and volumes labeled as V_b of the blocks are given in each figure.

Rank these situations, from greatest to least, on the basis of the tensions in the strings. That is, put first the situation that has the greatest tension in the string supporting the block, and put last the situation that has the lowest tension in the supporting string.



Greatest Tension 1____ 2____ 3____ 4____ 5____ 6____ Least Tension

Or, all of the strings have the same tension. _____

Or, the tension is zero in all of these strings. _____

Please carefully explain your reasoning.

How sure were you of your ranking? (circle one)

Basically Guessed

Sure

Very Sure

1 2 3 4 5 6 7 8 9 10