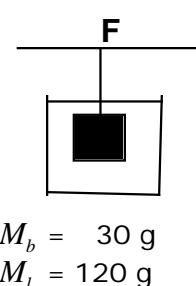
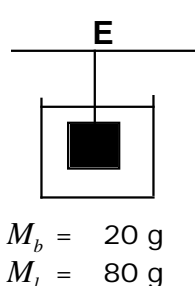
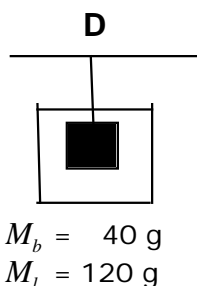
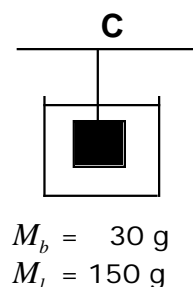
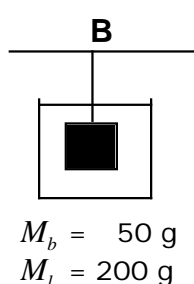
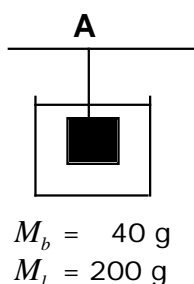


## Blocks Suspended in Liquids—Volume of Liquid Displaced <sup>99</sup>

Shown below are six containers that contain various liquids. Blocks of various solids are suspended in the liquids by being hung from a supporting rod. All of these blocks are the same size, but they have different masses (labeled as  $M_b$ ) since they are made of different materials. All of the containers have the same volume of liquid, but the masses of these liquids vary (labeled  $M_l$ ) since the liquids are different. Specific values for the masses of the blocks and the liquids are given in each figure. The volume of the blocks is one-fifth the volume of the liquids.

Rank these situations, from greatest to least, on the basis of the volume of the liquid displaced by the blocks.



Greatest Volume    1\_\_\_\_ 2\_\_\_\_ 3\_\_\_\_ 4\_\_\_\_ 5\_\_\_\_ 6\_\_\_\_    Least Volume

Or, all of the volumes of the liquids displaced by the blocks are the same. \_\_\_\_\_

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

<sup>99</sup> D. Maloney, C. Hieggelke