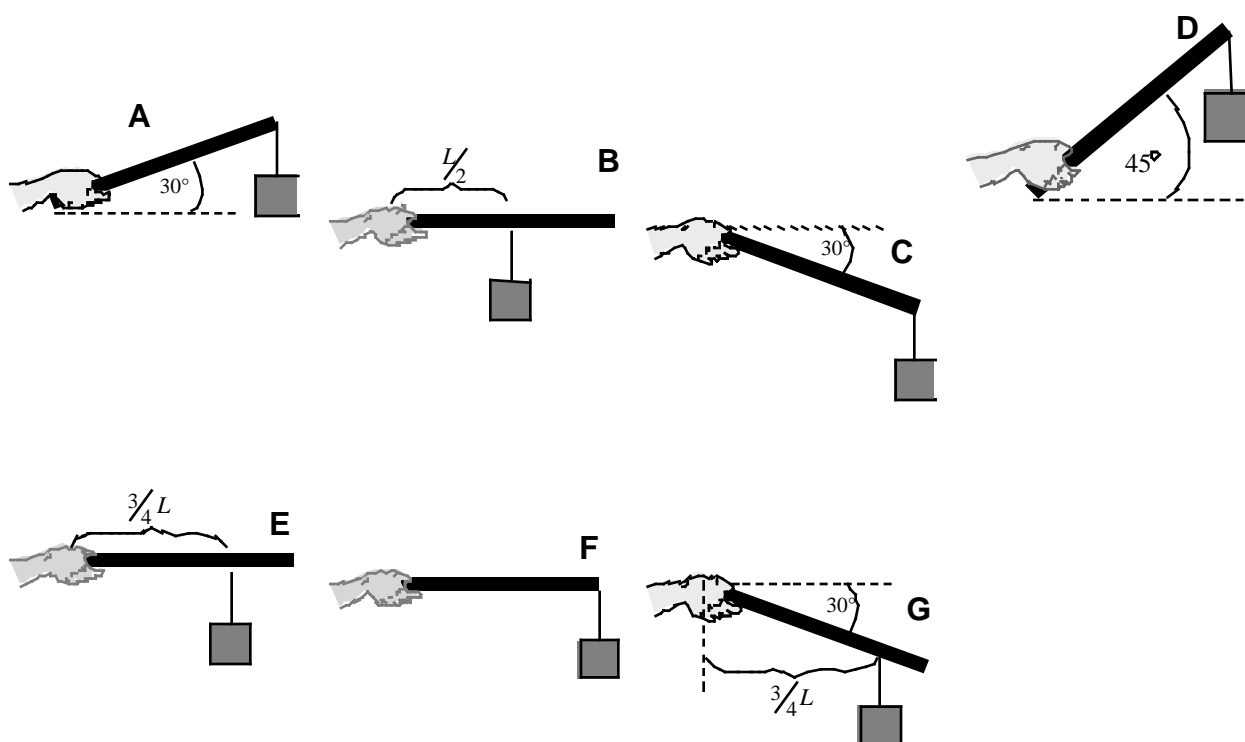


# Statics—Difficult to Hold I <sup>95</sup>

Shown below are seven situations where a student is holding a meter stick at the left end at various angles. A 1000 g mass is hung on the meter sticks at different locations. All of the meter sticks are identical, but the distance along the meter stick at which the 1000 g mass is hung and the angles at which the student holds the meter stick vary. Specific values are given in each figure. (Ignore the mass of the meter stick.)

Rank these situations, from greatest to least, on the basis of how difficult it would be for the student to hold the meter stick from the left end in the position shown. That is, put first the situation where it would be hardest to hold the meter stick at the angle shown and put last the situation where it would be easiest to hold it at the angle shown.



Hardest 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6 \_\_\_\_\_ 7 \_\_\_\_\_ Easiest

Or, it would be equally difficult to hold all seven of these meter sticks as shown. \_\_\_\_\_

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>95</sup> C. Hieggelke, D. Maloney, T. O’Kuma