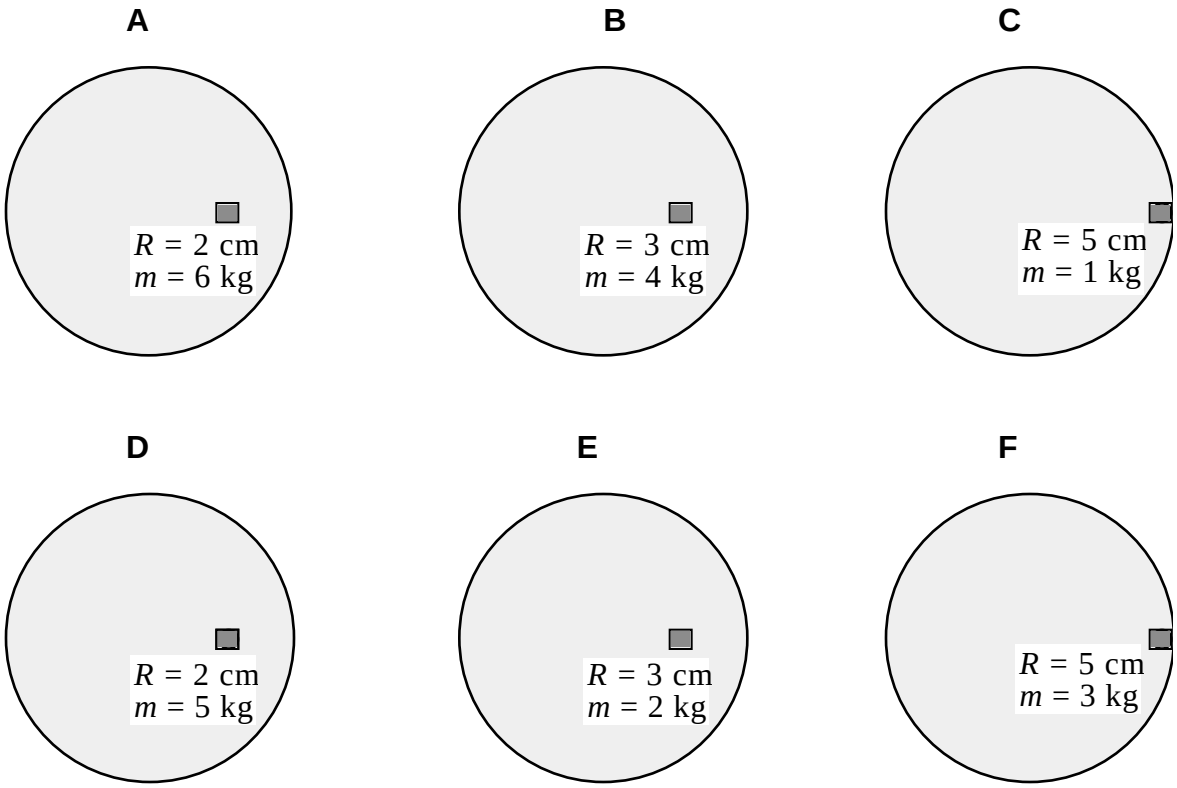
Blocks on Rotating Turntables—Horizontal Force[89]

Shown below in a top view are six blocks that are sitting at rest on rotating turntables. All of the turntables have the same rotation rate. The masses of the blocks and how far out from the center they sit varies. Specific values of the variable are given in the figures.

Rank these blocks, from greatest to least, on the basis of the magnitude of the horizontal forces holding the blocks on the turntables. That is, put first the block that has the largest force holding it on the turntable and put last the block that has the weakest force holding it on the turntable.



Greatest 1_____ 2_____ 3_____ 4_____ 5_____ 6_____ Least

Or, all of these blocks are held by equal strength forces. _____

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

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