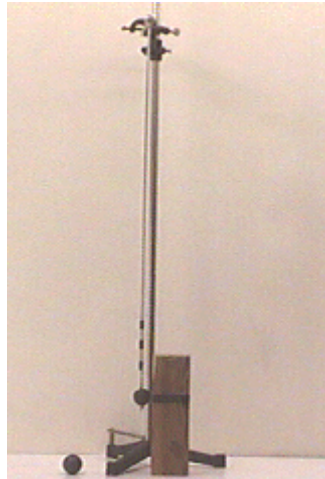


Answer #77

The answer is (b): the superball is more likely to tip the wooden block over than the mud ball. We cannot tell without further information whether both of the collisions or neither of the collisions are likely to tip over the block; however, we can say with certainty that the superball collision is *more likely* to tip the block.



Click here to see the [collision with the vacuum mud ball](#) or the [collision with the superball](#). The vacuum mud ball engages in an inelastic collision with the wooden block, stopping on impact and therefore transferring a linear momentum of mv to the block. On the other hand, the superball engages in an elastic collision, bouncing back away from the wooden block and therefore transferring a linear momentum of $2mv$ to the block. The greater momentum is more likely to, and in fact *does* tip over the block.

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