

Answer #223

The answer is (b): the ball will be in the cup, as seen in the photograph below and in a short mpeg video by clicking your mouse on the photograph.



When the pole is released and begins to fall, the pole is in a local inertial frame of reference, in which all of the accelerating masses become weightless. Because the ball is weightless the spring will **immediately** compress, pulling the ball into the cup. A [slow-motion](#) version of the movie is also available.

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