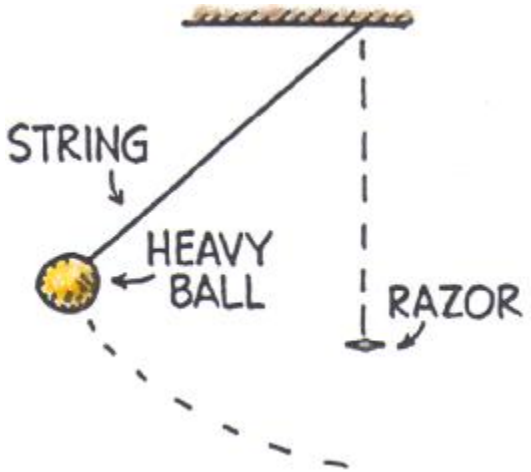
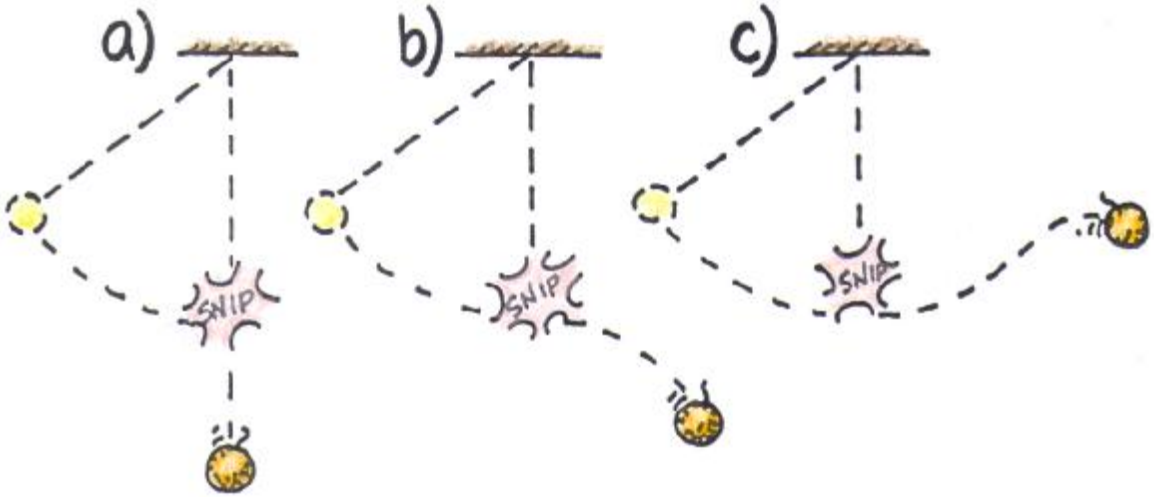
NEXT-TIME QUESTION



When the ball at the end of the string swings to its lowest point, the string is cut by a sharp razor.

Which path will the ball then follow?



CONCEPTUAL Physics

Hewitt Drew it!

NEXT-TIME QUESTION

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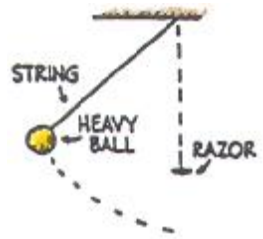

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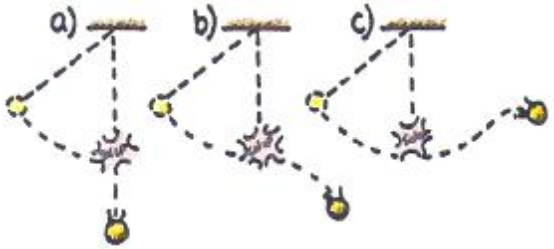

Answer: b

At the moment the string is cut, the ball is moving horizontally. After the string is cut there are no forces horizontally, so the ball continues horizontally at constant speed. But there is the force of gravity which causes the ball to accelerate downward, so the ball gains speed in the downward direction. The combination of a constant horizontal speed and a downward gain in speed produces the curved path called a parabola. The ball continues along a parabolic path b.