



(7 points, suggested time 13 minutes)

A cylinder of mass m_0 is placed at the top of an incline of length L_0 and height H_0 , as shown above, and released from rest. The cylinder rolls without slipping down the incline and then continues rolling along a horizontal surface.

(b) In terms of energy, explain why the two objects reach the bottom of their respective inclines with the same translational speed. Provide your answer in a clear, coherent paragraph-length response that may also contain figures and/or equations.

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