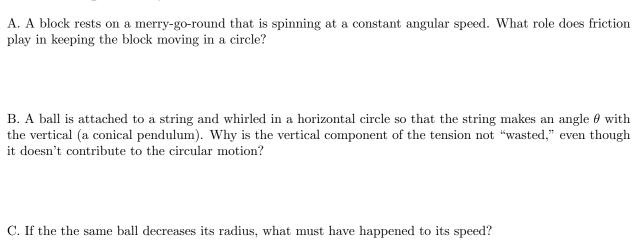
## Strings and Tension PHYS 2425

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## 1. Conceptual Questions



D. Suppose there is a conical pendulum whose angle relative to the vertical axis is approaching 90°. What prevents the angle from actually reaching 90°?

## 2. Newton's Laws

A. A small ball with mass m=0.5kg is attached to a physics string, L=1.2m and moves in a steady horizontal circle. (A conical pendulum.) The string makes an angle of  $\theta=30^{\circ}$  with the vertical axis. Find the ball's (i) speed, (ii) angular speed  $\omega$ , (iii) period T, and (iv) tension  $\vec{T}$ .