

### R. Knight 9.59

A 1.0-m-long massless rod is pivoted at one end, and swings around in a circle on a frictionless table. A block with a hole through the center can slide in and out along the rod. Initially, a small piece of wax holds the block 30 cm from the pivot point.

The block is spun at 50 rpm, then the temperature of the rod is slowly increased. When the wax melts, the block slides out to the end of the rod.

What is the final angular velocity (in rpm)?

