

Physics 10154 - Quiz 10C

A 0.450-kg mass is initially at rest against a spring ($k_s = 622 \text{ N/m}$) on an rough inclined plane tilted 51.0° above the horizontal. The coefficient of kinetic friction between the block and the plane is 0.218. The mass is released from rest and slides up the ramp for some distance (s) along the ramp before coming to a stop. What is the distance moved along the ramp from its starting point (so your distance will also include the 12.0 cm of spring compression)? The length of the ramp is not necessarily drawn to scale.

