Particle Work Energy:  Example Problem 2

A 10 kg block slides down a 3-4-5 slope with friction present ( $\mu = .25$ ). The block has an initial speed of $v_1 = 4$ m/s. When the block has slid 8 m down the slope it strikes the unstretched spring. Find the stretch, $s$, of the spring at which the block comes to rest. Will the block remain at rest at this position?

Spring Constant:
$k = 200$ N/m
10 kg block

\( v_1 = 4 \text{ m/s} \)

d = 8 m

Spring Constant:
\( k = 200 \text{ N/m} \)

\( \mu = 0.25 \)

Spring originally unstretched.