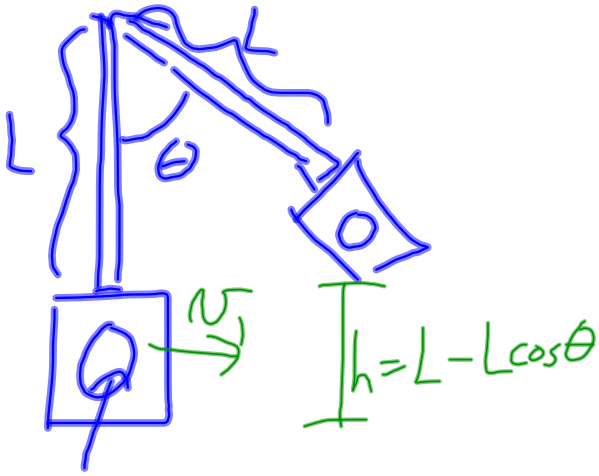
$m_{ball} = 1\,kg$

$M_{block} = 8\,kg$

$L = 0.3\,m$

$\theta = 38°$

find v



$m_{total} = m_{ball} + M_{block}$

$P_i = (m_{ball})v$

$P_f = (m_{ball} + M_{block})v_1$ find v_1 from cons. of energy

$v_1 = 1.116\,m/s$

$P_i = P_f$

$v = 10.04\,m/s$