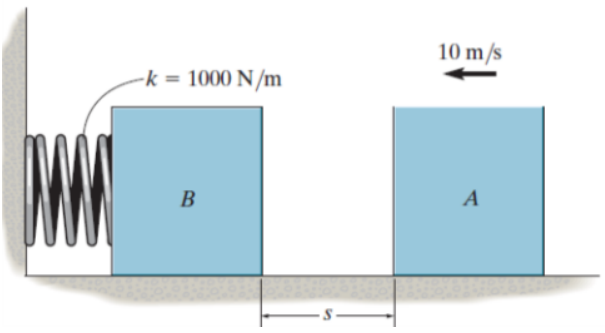
3) The $15-kg$ block $A$ slides on the surface for which $\mu_k = 0.3$. The block has a velocity $v = 10\ m/s$ when it is $s = 4\ m$ from the $10-kg$ block $B$. If the unstretched spring has a stiffness $k = 1000\ N/m$, determine the maximum compression of the spring due to the collision. Take $e = 0.6$.
($g = 9.81\ m/s^2$)
Show necessary free body diagram(s), and clearly label coordinate system(s).




30 marks