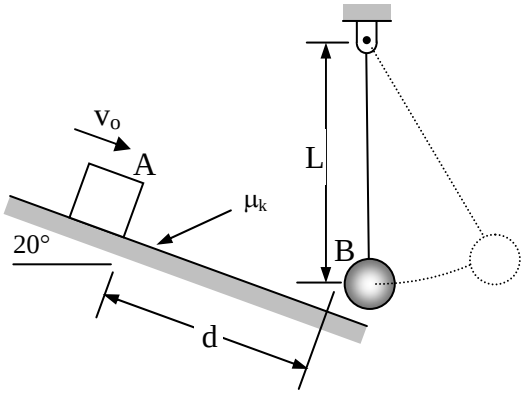
Homework (LE 6)

Problem 6.1

Block A slides down the incline and strikes sphere B causing it to swing up. The tension in the cable is 100 N immediately after the impact. Assume the mass of A, m_A, the mass of B, m_B, the coefficient of restitution, e, the coefficient of friction, μ_k, and the distance, d, are all known.



a) Determine the equations necessary to determine the initial velocity of A, v_o. Neglect the friction between A and B during the impact.

b) If m_A = 1 kg, m_B=0.5kg, e = 0.6, μ_k= 0.35, L = 1.2 m and d = 1.4 m, determine the initial velocity of A, v_o

Problem 6.2

Problem 3.16 in the notes.