

b) The cylinder has a mass of 20 kg and is released from rest when $h=0$. fig 7.b. Determine its speed when $h=3$ m. The springs each have an unstretched length of 2m. ($k=40$ N/m)

[8]

c) A ball of mass 0.15 kg is approaching with a velocity of 30 m/s on to a stationary block of mass 0.2 kg centrally as shown in fig 7.c. If coefficient of restitution between the ball and block is $e=0.7$, find the distance travelled by the block on a flat horizontal rough surface with dynamic friction $\mu_k=0.3$.

[6]

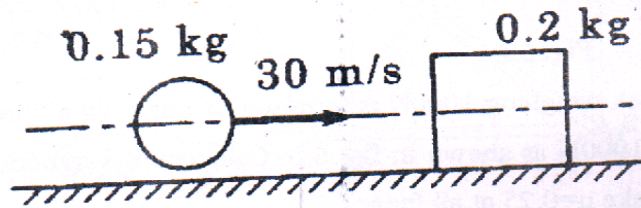


Fig 7.c