ROSE-HULMAN INSTITUTE OF TECHNOLOGY

Department of Mechanical Engineering

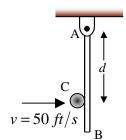
ES 204 Mechanical Systems

Example Problem - Le 20

Ex. The 6-lb, 3-ft rod AB is originally at rest and is hit by a 1-lb ball C traveling at 50-ft/s at a distance d below the pin at A. The coefficient of restitution is 0.5 and the weight of AB should be treated as an impulsive force.

Determine:

- a) the distance d so that there is no horizontal impulse at A,
- b) the rod's angular velocity just after the impact



Given: $m_{AB} = 0.186 \ lb \ s^2/ft$ $m_C = 0.031 \ lb \ s^2/ft$ $I_{GAB} = 0.140 \ lb \ s^2/ft$

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