

## 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:

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

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

