4. . A bullet of mass m traveling at velocity v strikes a block of mass 2m that is attached to a rod of length R. The bullet collides with the block at a right angle and gets stuck in the block. The rod is free to rotate. What is the centripetal acceleration of the block after the collision?  (A) v2 /R (B) (1/2)v2 /R (C) (1/3)v2 /R (D) (1/4)v2 /R (E) (1/9)v2 /R