

Quiz 8: Rotational Dynamics

8.01

Week 11D3

Next Reading Assignment: W12D1

Young and Freedman: 11.1-11.3,
10.3-10.6

Concept Question: Constants of the Motion



A bowling ball is initially thrown down an alley with an initial speed v_0 , and it slides without rolling but due to friction it begins to roll until it rolls without slipping. What quantities are constant before it rolls without slipping?

1. Energy.
2. Angular momentum about the center of mass.
3. Angular momentum about a fixed point on the ground.
4. Three of the above.
5. Two of the above.
6. One of the above.
7. None of the above.