

Physics 231 - 18-Oct-99



- Moments of Inertia
- Rotational Kinetic Energy
- Angular Momentum
- Quiz

Moment of Inertia



Rotational Kinetic Energy



Angular Momentum



Q1 - Answer = c

Q2 - Problem A - Last name A-K

A solid sphere of mass 10 kg and radius 10 cm rolls without slipping at 2.5 m/s. What is its total kinetic energy? Recall that $I_{\text{sphere}} = \frac{2}{5} MR^2$.

- A. 62J
- B. 4400 J
- C. 22 J
- D. 31 J
- E. 44 J

Q1 - Answer = c

Q2 - Problem B - Last Name L-Z

- A solid brass cylinder of mass 7.5 kg and radius 20 cm rolls without slipping on the ground at a speed of 3.5 m/s. What is its total kinetic energy? Recall that $I_{\text{cylinder}} = 1/2 MR^2$.

A. 69J

B. 46 J

C. 35 J

D. 7000 J

E. 92 J