

# Rolling v/s Sliding

If two identical slotted weights ( $I = (1/2)mr^2$ ) are released from rest at the same instant from the top of a ramp (inclined at an angle to the horizontal), such that one rolls and the other slides, which, would you predict, will reach the bottom first?

- a.) Both will reach the bottom at exactly the same time.
- b.) The slotted weight that rolls.
- c.) The slotted weight that slides.
- d.) Depends on the moment of inertia of the weights.
- e.) Cannot be predicted with the given information.