Consider two spheres of the same diameter and same weight. One is pure silver and the other is silver-plated lead. Without probing them, how could you tell the difference between them?
Next-Time Question

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Answer:
If they’re the same size and same weight, the lead one must contain a central cavity that is larger than the cavity (if any) in the silver one. That means the lead sphere must have a greater rotational inertia. So roll the two down an incline and the slower one is the lead sphere.