

4-4)

A solid, uniform sphere is supported against a frictionless vertical wall by a thin wire, as shown. The sphere's mass is 45 kg, its diameter is 32 cm, and the length of the wire is 30 cm. The wire, if extended, would pass through the center of the sphere.

- a) Draw a free body diagram for the sphere.
- b) Find the tension on the wire.
- c) Find the normal force that the wall exerts on the sphere.

