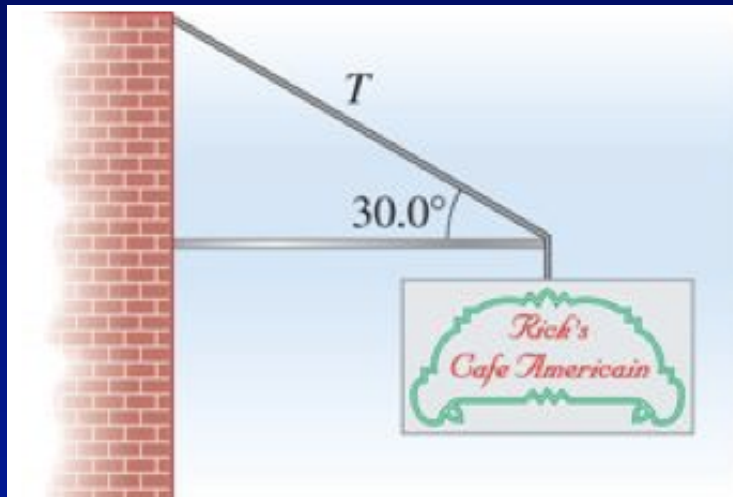


Physics 1021

Spring 2012
Chapter 7

Tension Example

A 200.0-N sign is suspended from a horizontal strut of negligible weight. The force exerted on the strut by the wall is horizontal. Draw an FBD to show the forces acting on the strut. Find the tension T in the diagonal cable supporting the strut.



Phys 1021 Ch 7, p 2

Ponderable: Hanging plastic ball

- In an electricity experiment, an electrically charged plastic ball (mass = 100 g) is suspended on a 60 cm long string. When a charged rod is brought near the ball, the rod exerts a horizontal electrical force F_{elec} on it, causing the ball to swing out to a 20° angle and remain at rest there.
- What is the magnitude of the electric force F_{elec} ?
- What is the tension in the string?