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.
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?