7 A balloon of mass 15.0 g is filled with helium to a volume of 4.50 m^3 and attached to the ground via a light elastic cord of constant k = 80 N m^{-1}. The wind blows on the balloon such that the elastic cord makes an angle of 60° to the ground. Density of air is 1.29 kg m^{-3} and density of helium is 0.180 kg m^{-3}.

What is the extension of the elastic cord when the balloon is at equilibrium in the above position?

A 0.615 m

B 0.650 m

C 0.705 m

D 0.750 m