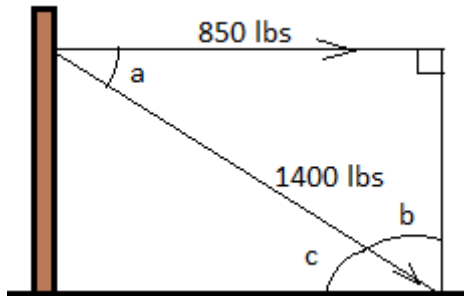## Answer on Question #63906, Physics / Mechanics | Relativity

One end of a transmission wire which exerts a horizontal tension of 850 lbs is fastened to a pole where a guy wire is also fastened. What is the angle which the guy wire can make with the pole if it exerts a tension of 1,400 lbs?

Solution:

cos a = 850 lbs / 1400 lbs = 0.607

a = arccos(0.607) = 52.6⁰

Total acute angles of a right triangle is equal to 90 °

90 ° = ∠a + ∠b

∠b = 90 ° - 52.6⁰ = 37.4⁰

∠c = 52.6⁰

Answer: 52.6⁰