

62. Since GA exerts a leftward force T at the corner A , then (by equilibrium of horizontal forces at that point) the force F_{diag} in CA must be pulling with magnitude

$$F_{\text{diag}} = \frac{T}{\sin 45^\circ} = T\sqrt{2} .$$

This analysis applies equally well to the force in DB . And these diagonal bars are pulling on the bottom horizontal bar exactly as they do to the top bar, so the bottom bar is the “mirror image” of the top one (it is also under tension T). Since the figure is symmetrical (except for the presence of the turnbuckle) under 90° rotations, we conclude that the side bars also are under tension T (a conclusion that also follows from considering the vertical components of the pull exerted at the corners by the diagonal bars).