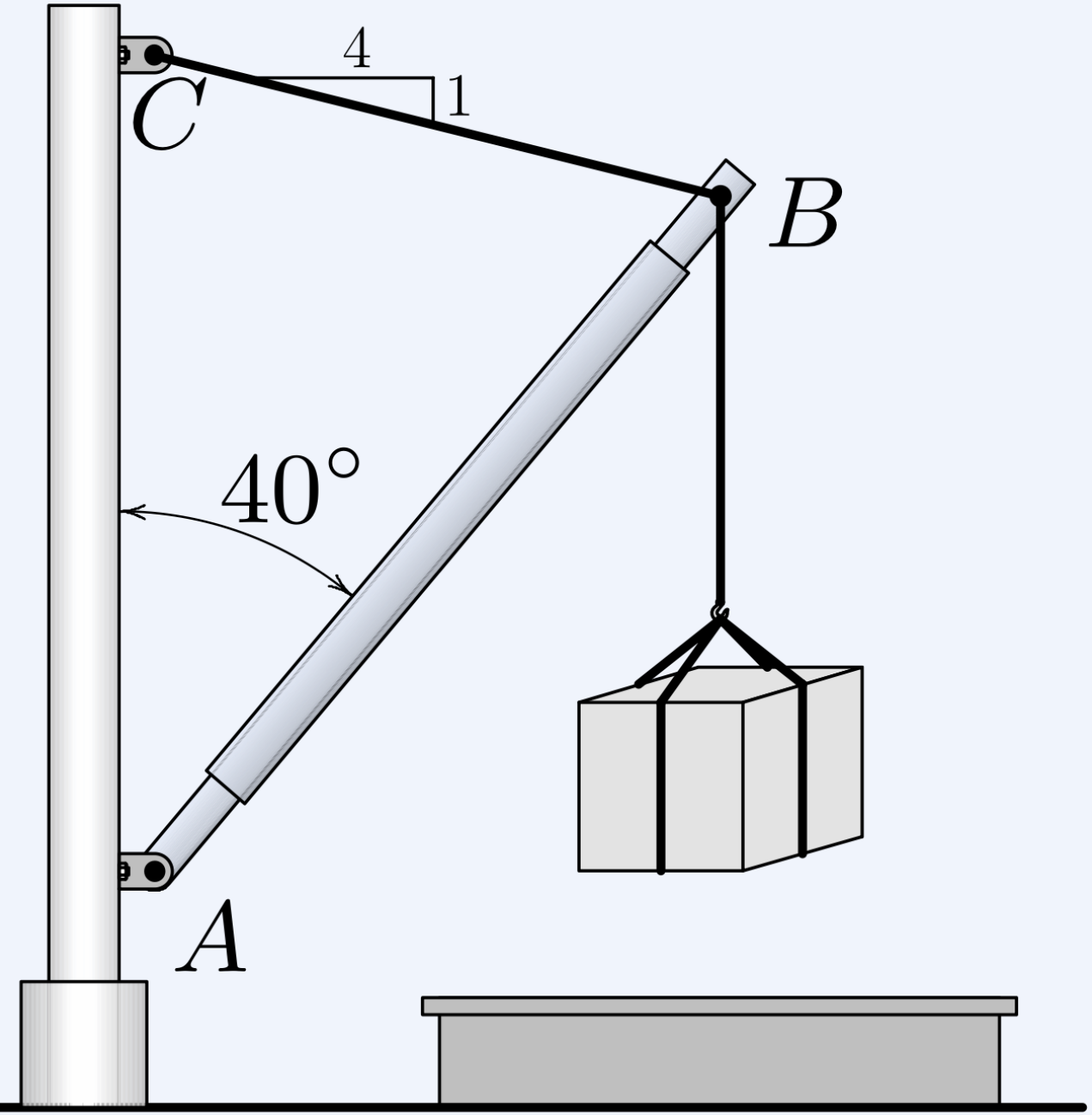
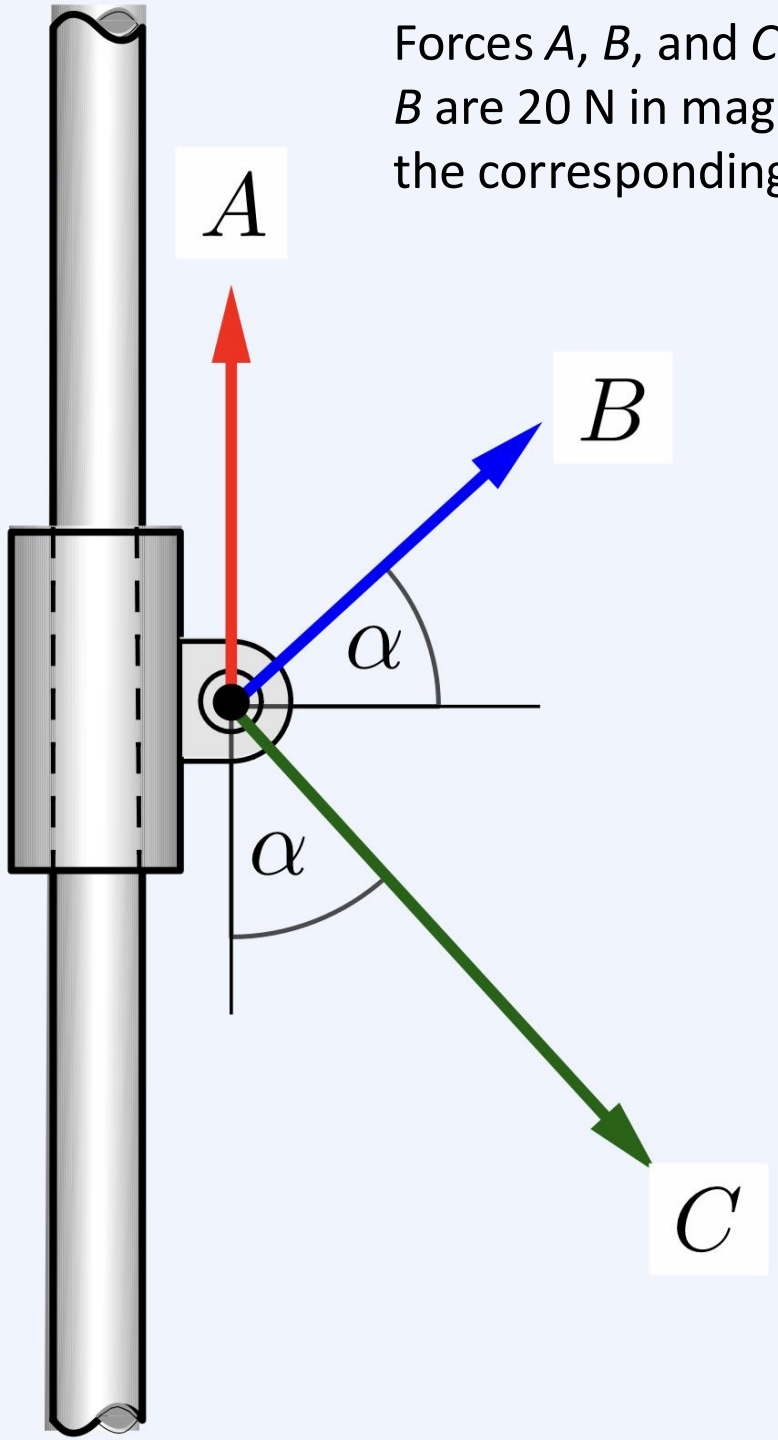
The 0.1-Mg crate is suspended through a 20-m long boom *AB* held by a topping lift *BC*. Determine the forces in the boom and in the topping lift.

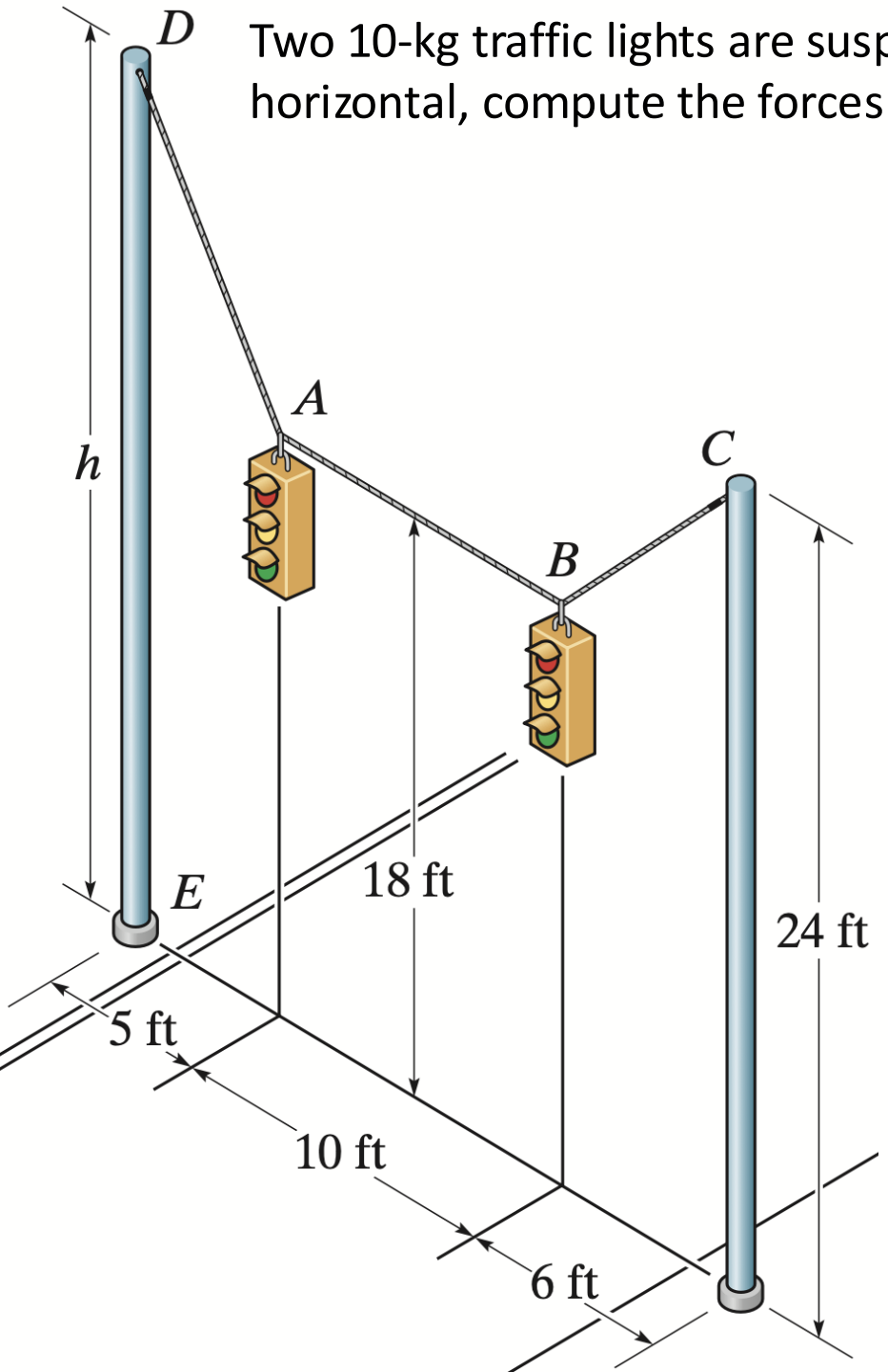


The power cables are symmetric about the cross arm. Each cable pulls with a 7-kN force. Estimate the tension in the guy wire.

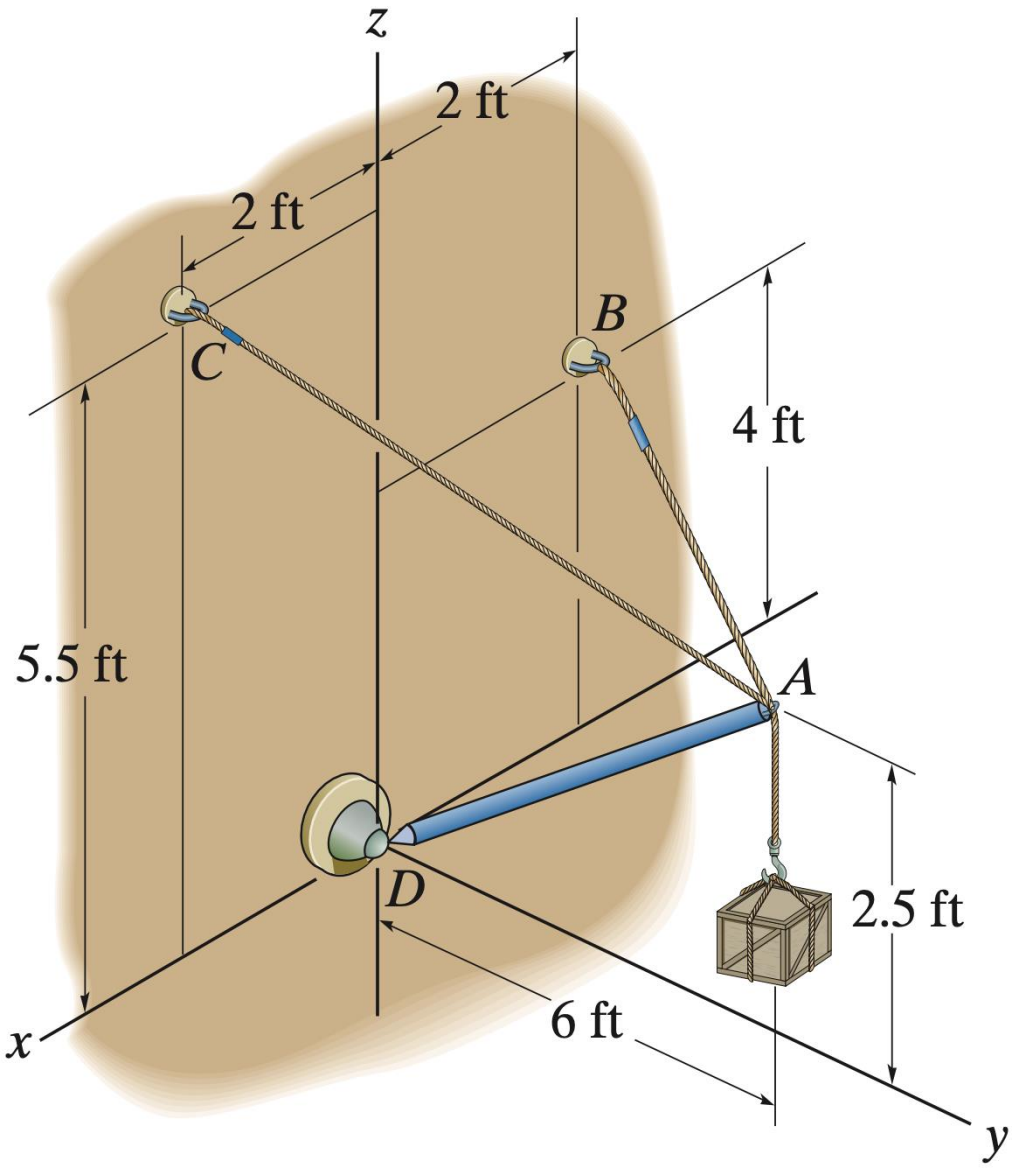
Forces *A*, *B*, and *C* act on a machine part that is free to slide along a vertical, frictionless rod. *A* and *B* are 20 N in magnitude, while *C* is 30 N. Determine the value α required for static equilibrium, and the corresponding reaction on the slider.



Two 10-kg traffic lights are suspended from two poles through three cables. If cable *AB* is perfectly horizontal, compute the forces in the cables.



Determine the forces developed in the cables and in the strut as the 300-lb crate hangs still.



If each cable can sustain up to a 300-lb tension, determine the largest crate weight that can be supported and the corresponding force developed along the strut.