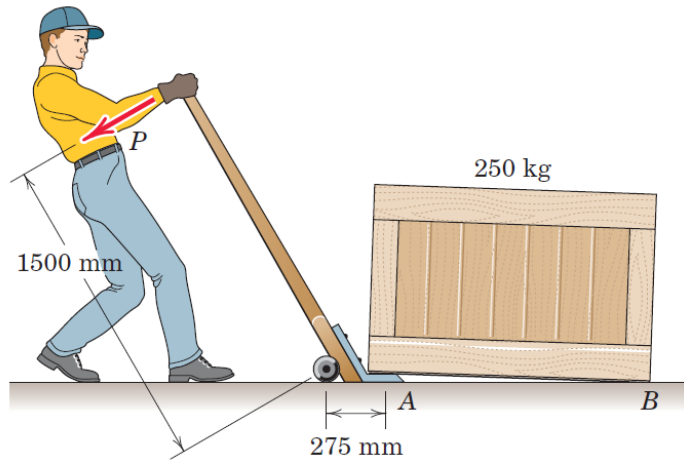


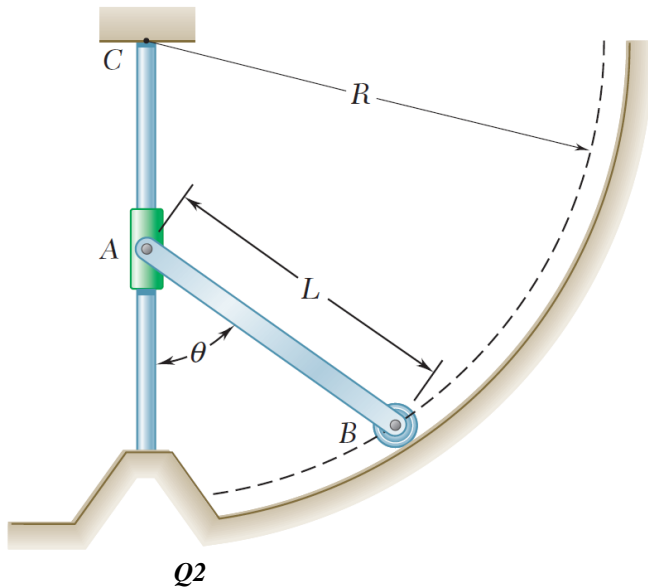
ENGINEERING MECHANICS (ME101) – TUTORIAL 2, 17 Jan 2020

Q1 – Determine the force magnitude P required to lift one end of the 250-kg crate with the lever dolly as shown. State any assumptions.



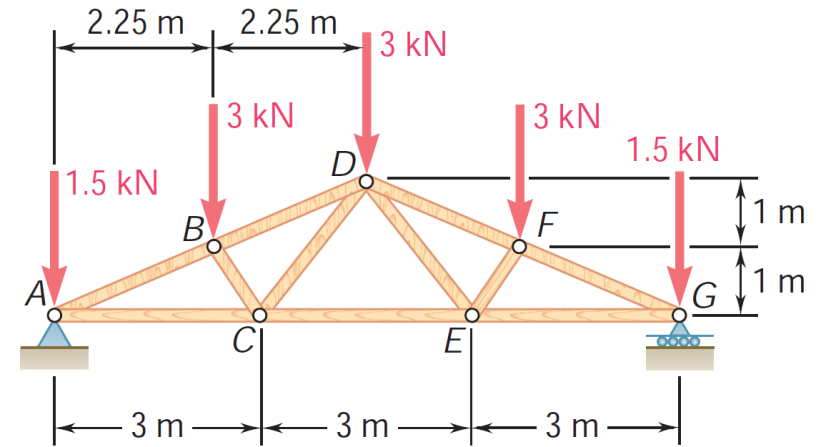
Q1

Q2 – A slender rod of length L and weight W is attached to a collar at A and is fitted with a small wheel at B . Knowing that the wheel rolls freely along a cylindrical surface of radius R , and neglecting friction, derive an equation in θ , L , and R that must be satisfied when the rod is in equilibrium.



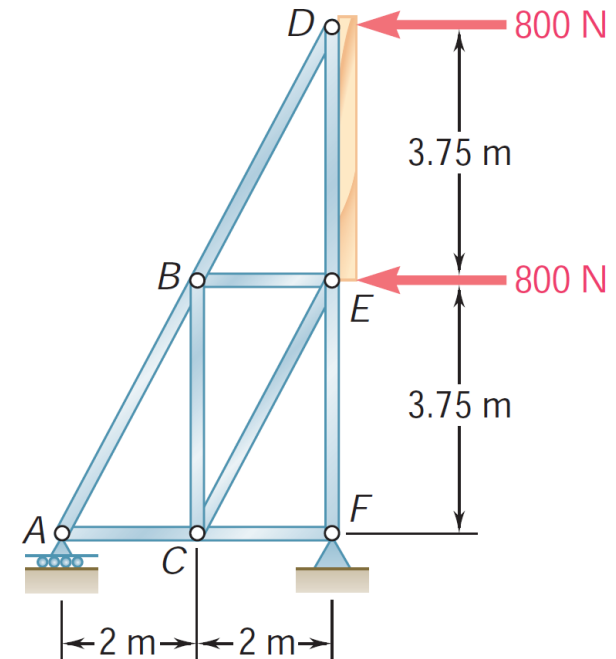
Q2

Q3 – Determine the force in each member of the Fink roof truss shown. State whether each member is in tension or compression.



Q3

Q4 – The truss shown is one of several supporting an advertising panel. Determine the force in each member of the truss for a wind load equivalent to the two forces shown. State whether each member is in tension or compression.



Q4