

Q₁

(30 degree)

Two integral pulleys shown in figure (1) are subjected to the belt tensions shown. If the resultant R of these forces passes through the center O , determine T and the magnitude of R and the counterclockwise angle θ it makes with the x -axis.

Q1

(30 degree)

The 30 kg pipe is supported at A by a system of five cords as shown in figure (2). Determine the force in each cord for equilibrium.

Q2 Answer only one

(40 degree)

- Determine the force in members CD , CF , and CG which shown in figure (3), and state in these members are in tension or compression.
- Determine the reaction at the roller F for the frame loaded as shown in figure (4).

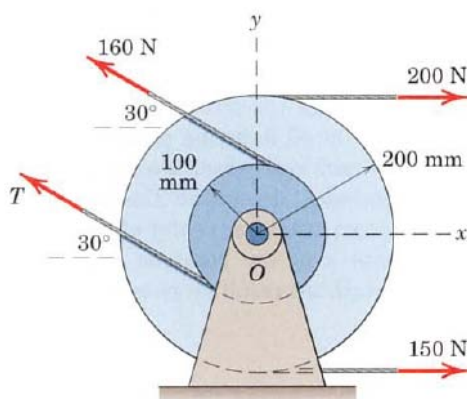


Figure (1)

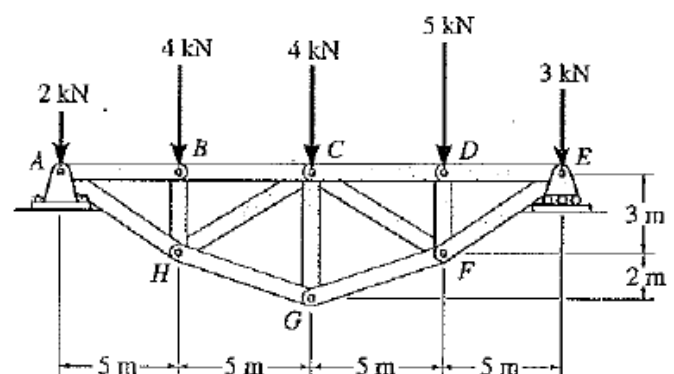


Figure (3)

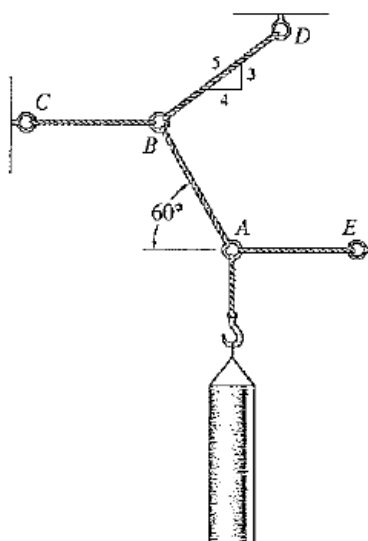


Figure (2)

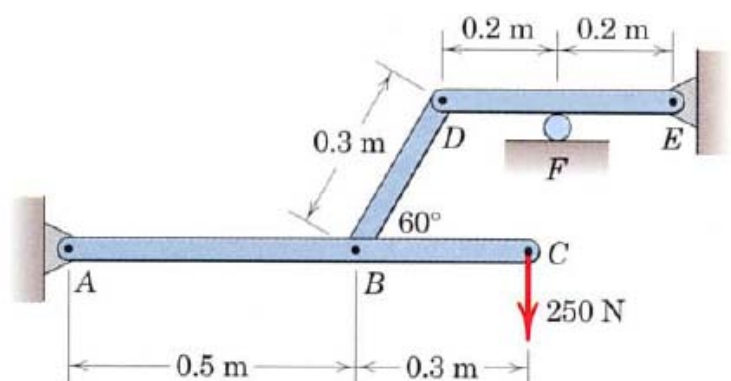


Figure (4)