ENDS 231: Practice Quiz 3

Clearly show your work and answer.

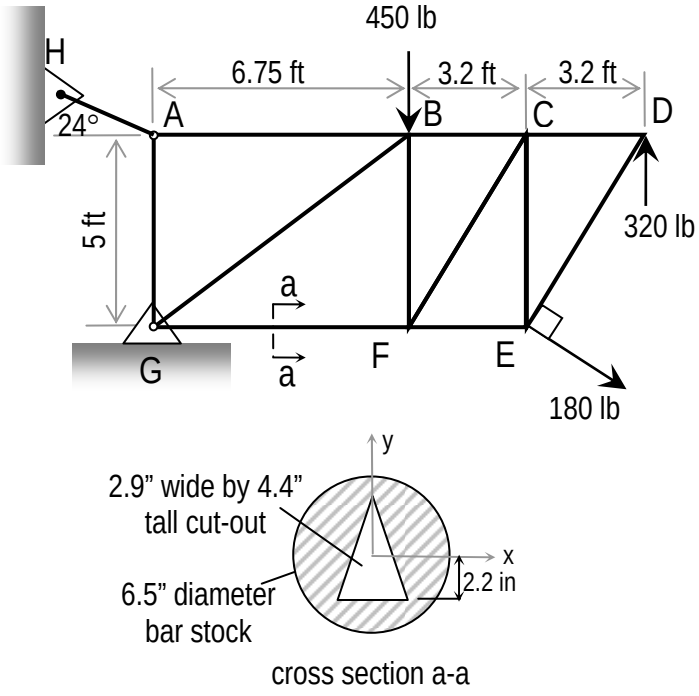
A truss has the configuration and loads as shown. *The reactions at the supports are*:
G_x = -192.6 lb, G_y = 254.3 lb and
AH = 48.9 lb *compressive*.

The truss members have cross section dimensions and reference origin as shown.

a) What is the force in members **BC and FC** of the truss using the method of sections?

b) For the cross section, find the centroid location, and moment of inertia with respect to the x axis.

c) *[some short question from the text material]*



Answers

a) BC = -347.5 lb (C), FC = 264.7.0 lb (T)
b) $\hat{x}$ = 0 in, $\hat{y}$ = -0.174 in, I_x = 79.77 in^4

Disclaimer: Answers have NOT been painstakingly researched.

additional member forces for practice:
AB = -41.0 lb (C), AG = -18.3 lb (C), GB = -381.4 lb (C), GF = 499.1 lb (T), BF = -223.0 lb (C), FE = 356.4 lb (T), CE = -223.0 lb (C), CD = -204.8 lb (C), ED = 379.9 lb (T)