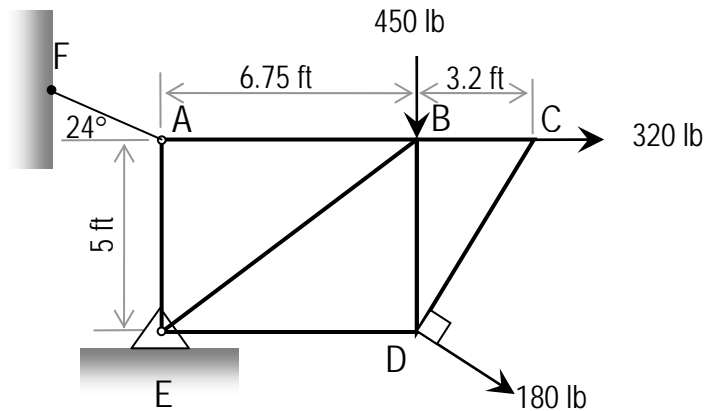


ENDS 231: Practice Quiz 2

Clearly show your work and answer.

The truss supports loads 450 lb. at B, 320 lb. at C, and 180 lb. at D as shown.

- Determine the reactions at the pin at E.
- Determine the tension in short cable AF.
- If the force in member **AE** is 471.2 lb in tension, solve for the remaining member forces at joint **E** using the method of joints.
- [some short question from the text material]



Answers

- $E_x = +586.9 \text{ lb } (\rightarrow)$, $E_y = +75.8 \text{ lb } (\uparrow)$
- $T_{AF} = 1158.7 \text{ lb}$
- $ED = 151.6 \text{ lb } (T)$, $EB = -919.0 \text{ lb } (C)$

additional member forces for practice:

$AB = 1058.5 \text{ lb } (T)$, $BC = 320 \text{ lb } (T)$, $BD = 97.0 \text{ lb } (T)$, $DC = 0 \text{ lb}$.

Disclaimer: Answers have NOT been painstakingly researched.