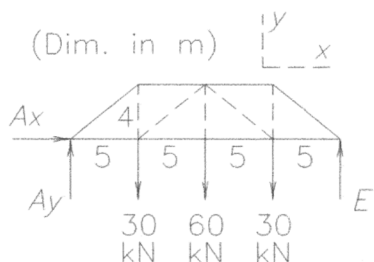


4/10

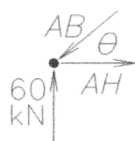


As a whole:  $\Sigma F_x = 0 \Rightarrow A_x = 0$

$A_y = E = 60 \text{ kN}$  by

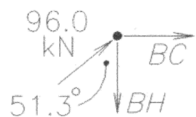
$\Sigma F_y = 0$  and symmetry.

Joint A:  $(\theta = \tan^{-1}(4/5) = 38.7^\circ)$



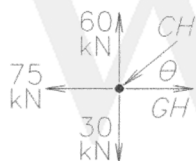
$$\begin{cases} \Sigma F_y = 0 : 60 - AB \sin \theta = 0, \underline{AB = 96.0 \text{ kN C}} \\ \Sigma F_x = 0 : AH - 96.0 \cos \theta, \underline{AH = 75 \text{ kN T}} \end{cases}$$

Joint B:



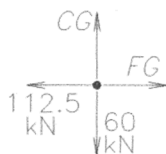
$$\begin{cases} \Sigma F_x = 0 : BC + 96.0 \sin 51.3^\circ = 0, \underline{BC = -75 \text{ kN (C)}} \\ \Sigma F_y = 0 : -BH + 96.0 \cos 51.3^\circ = 0, \underline{BH = 60 \text{ kN T}} \end{cases}$$

Joint H:



$$\begin{cases} \Sigma F_y = 0 : -CH \sin \theta + 30 = 0, \underline{CH = 48.0 \text{ kN C}} \\ \Sigma F_x = 0 : 48.0 \cos \theta + GH - 75 = 0, \underline{GH = 112.5 \text{ kN T}} \end{cases}$$

Joint G:



$\Sigma F_y = 0 \Rightarrow \underline{CG = 60 \text{ kN T}}$

By symmetry:

$FG = 112.5 \text{ kN T}, CF = 48.0 \text{ kN C}$

$CD = 75 \text{ kN C}, DF = 60 \text{ kN T}$

$\underline{EF = 75 \text{ kN T}, DE = 96.0 \text{ kN C}}$