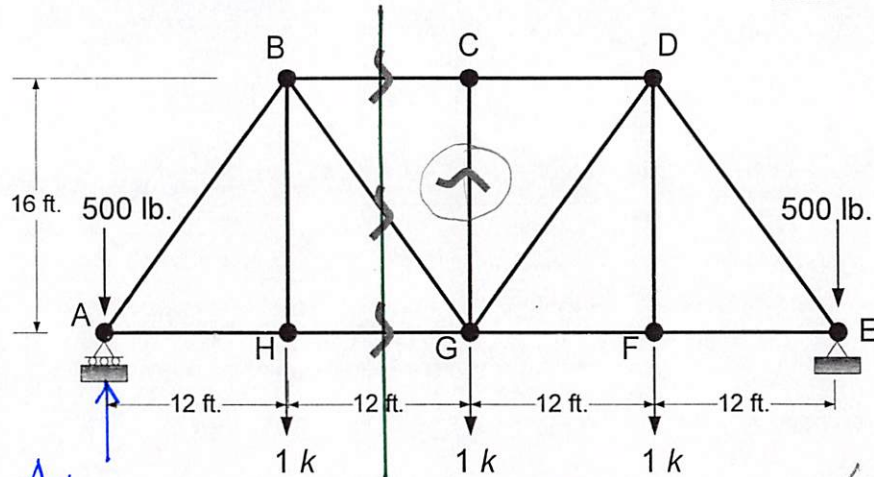
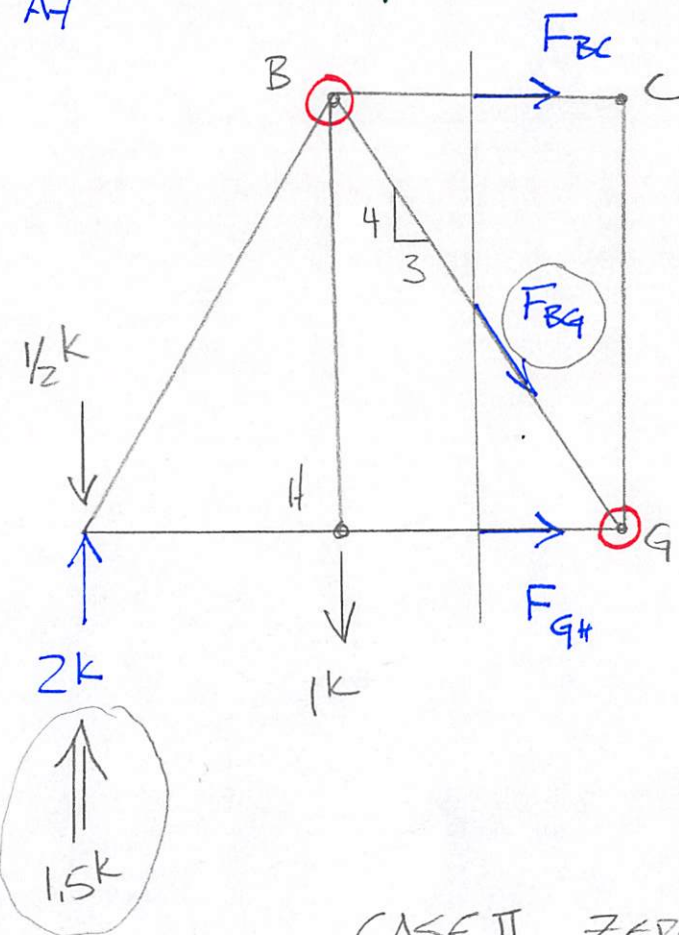


Example 3c-1: Determine the forces BC, BG, HG, and CG in the following truss.



$$\begin{aligned} \sum M_E = 0 &= 1k(12ft + 24ft + 36ft) + \frac{1}{2}k(48ft) \\ &\quad - A_y(48ft) \end{aligned} \quad \underline{A_y = 2k}$$



$$\begin{aligned} \sum M_B = 0 &= F_{GH}(16ft) - 1.5k(12ft) \\ \underline{F_{GH} = 1.125k} \end{aligned}$$

$$\begin{aligned} \sum M_G = 0 &= -F_{BC}(16ft) + 1k(12ft) - 1.5k(24ft) \\ \underline{F_{BC} = -1.5k} \end{aligned}$$

$$\begin{aligned} \sum F_y = 0 &= -\frac{4}{5}F_{BC} - 1k + 1.5k \\ \underline{F_{BC} = 0.625k} \end{aligned}$$

CASE II ZERO FORCE MEMBER $F_{CG} = 0$