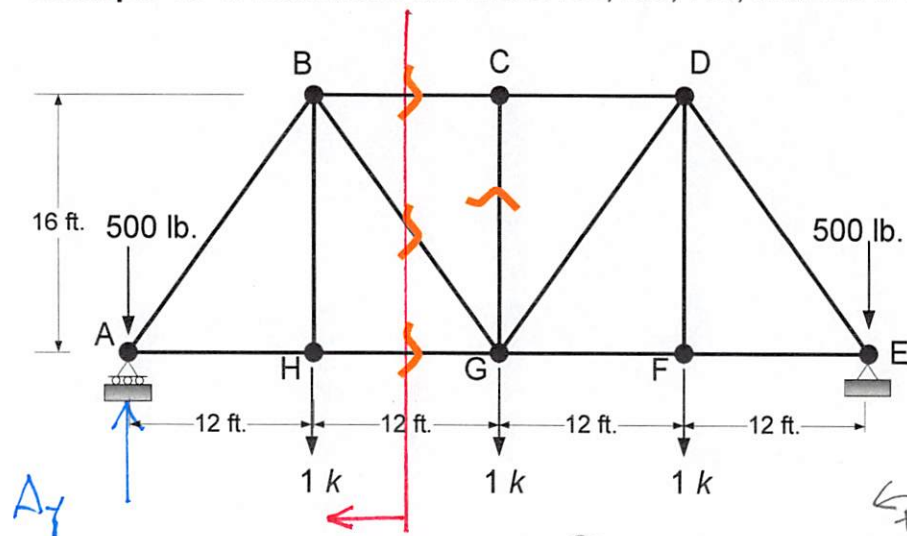
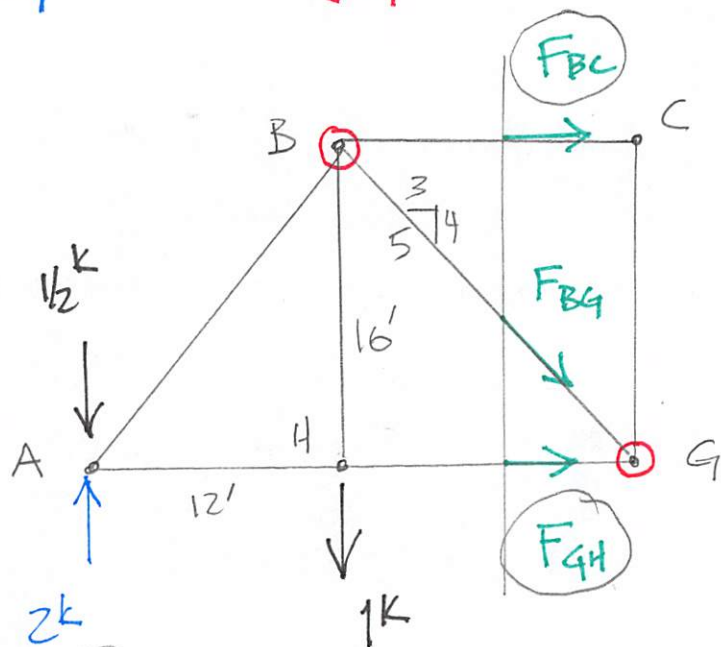


Example 3c-1: Determine the forces BC, BG, HG, and CG in the following truss.



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

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



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

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

CASE II ZERO-FORCE MEMBER

$$\underline{F_{CG} = 0}$$