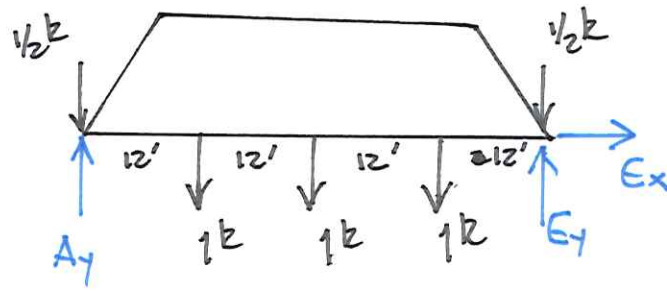
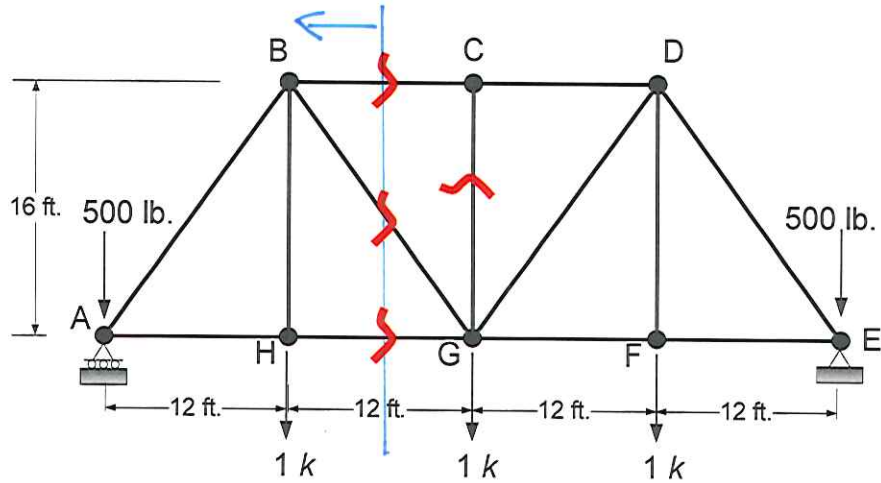


Example 3-4: Determine the forces BC, BG, HG, and CG in the following truss.

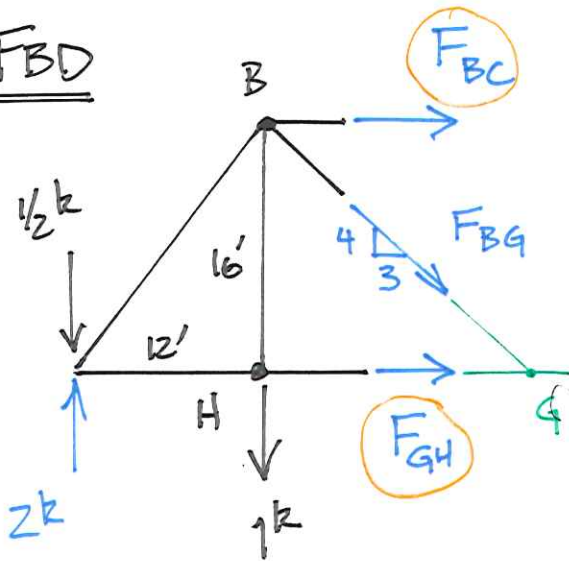


$$\sum M_E = 0 = 1k(12' + 24' + 36') + \frac{1}{2}k(48') - A_y(48')$$

$$\underline{A_y = 2k}$$

CASE 2 \rightarrow $F_{CG} = 0$

FBD



$$\sum M_B = 0 = F_{GH}(16') - 1.5k(12') \quad \underline{F_{GH} = 1.125k}$$

$$\sum M_G = 0 = -F_{BC}(16') + 1k(12') - 1.5k(24')$$

$$\underline{F_{BC} = -1.5k}$$

$$\sum F_y = 0 = -\frac{4}{5}F_{BG} - 1k + 1.5k$$

$$\underline{F_{BG} = 0.625k}$$