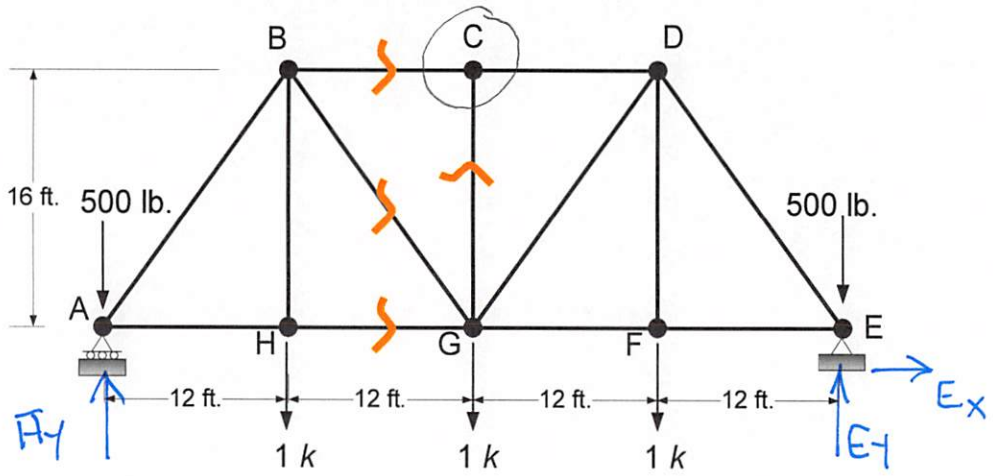
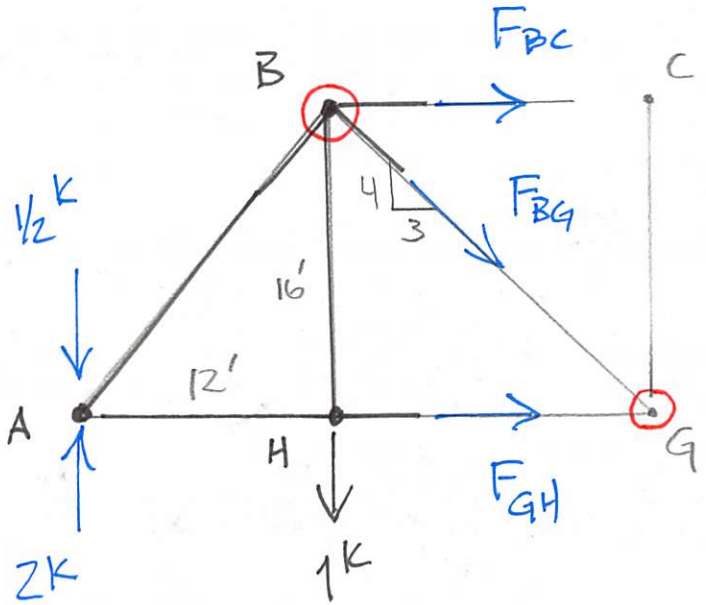
Example 3c-1: Determine the forces BC, BG, HG, and CG in the following truss.



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

$$A_y = 2^k$$

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



$$\circlearrowleft^{+}\sum M_B = 0 = F_{GH}(16') - 1.5^k(12')$$

$$F_{GH} = 1.125^k$$

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

$$F_{BC} = -1.5^k$$

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

$$F_{BG} = 0.625^k$$