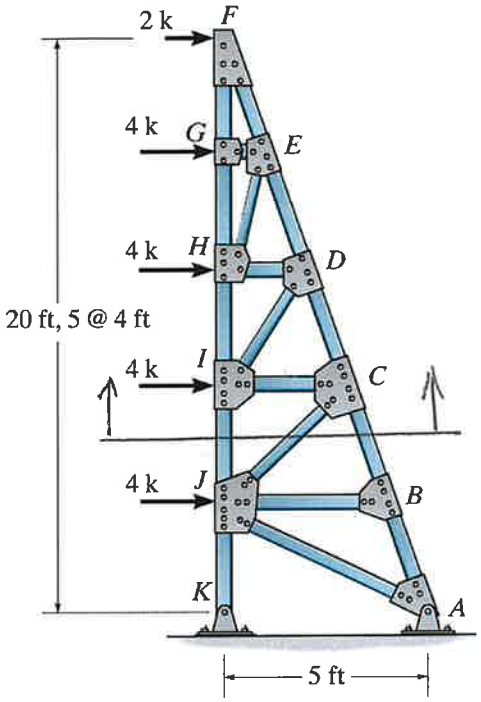
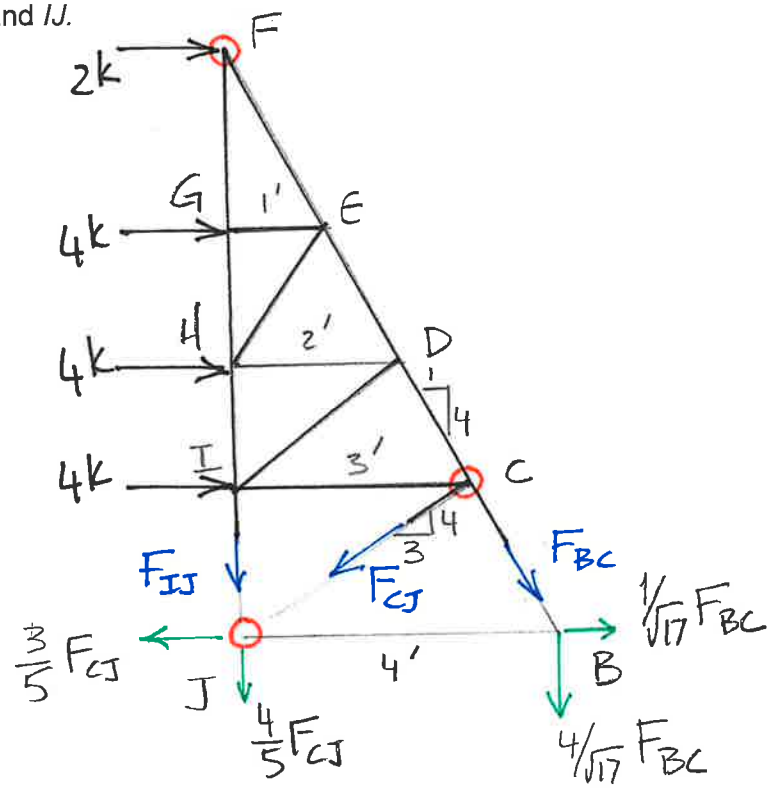
CIVL 3121 Quiz #3 S24 Name: _____

Determine the forces in members *BC*, *CJ*, and *IJ*.





$$\circlearrowleft + \sum M_C = 0 = F_{IJ}(3') - 4^k(4' + 8') - 2^k(12') \qquad F_{IJ} = 24^k$$

$$\circlearrowleft + \sum M_J = 0 = -\frac{4}{\sqrt{17}} F_{BC}(4') - 4^k(4' + 8' + 12') - 2^k(16')$$

$$F_{BC} = -32.98^k$$

$$\circlearrowleft + \sum M_F = 0 = -\frac{3}{5} F_{CJ}(16') + 4^k(4' + 8' + 12') \qquad F_{CJ} = 10^k$$

$$* \; \pm \rightarrow \sum F_x = 0 = -\frac{3}{5} F_{CJ} + \frac{1}{\sqrt{17}} F_{BC} + 4^k + 4^k + 4^k + 2^k$$

$$F_{CJ} = 10^k$$