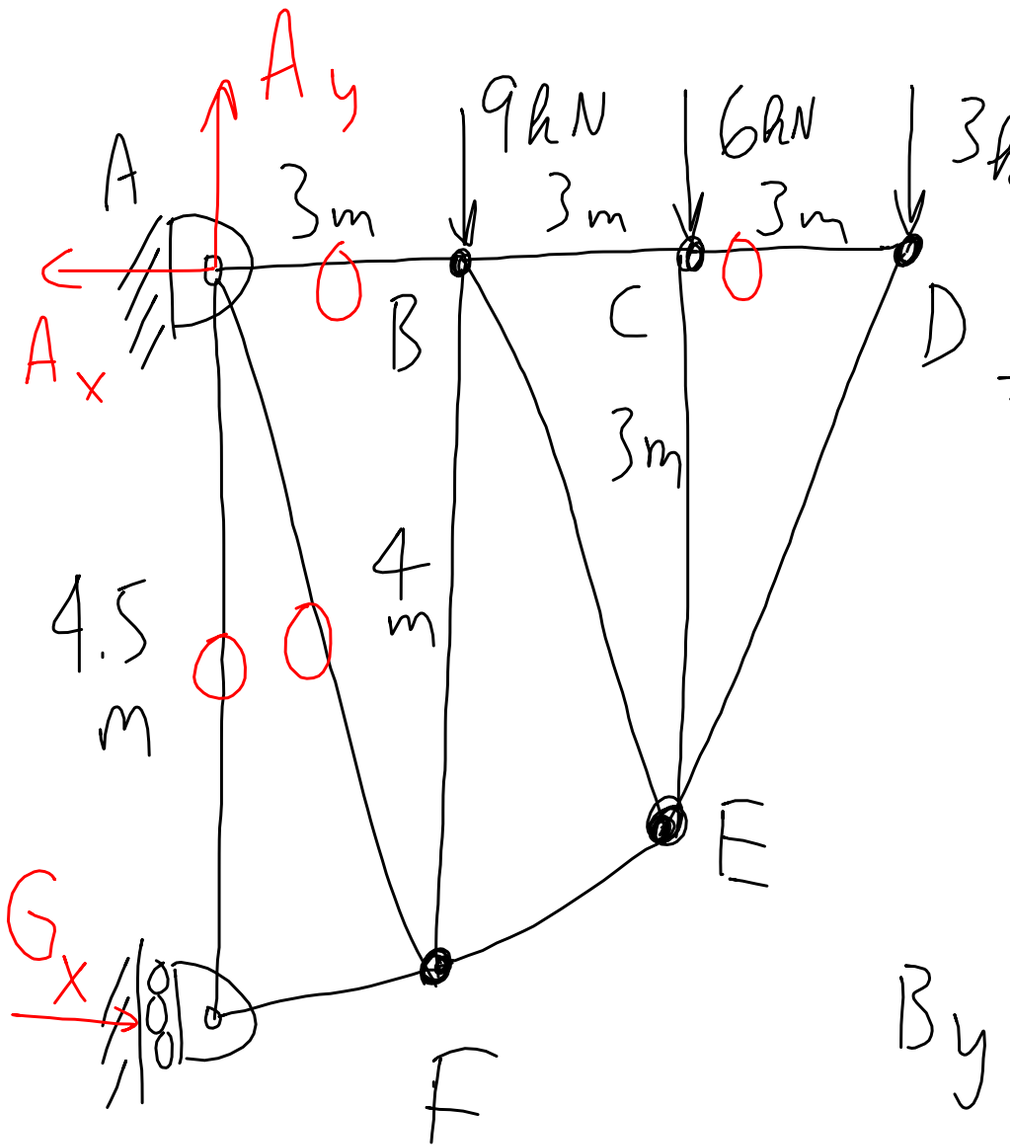



From last time....

$$+\circlearrowleft \sum M_A = G_x(4.5) - 9(3)$$

$$- 6(6) - 3(9) = 0$$

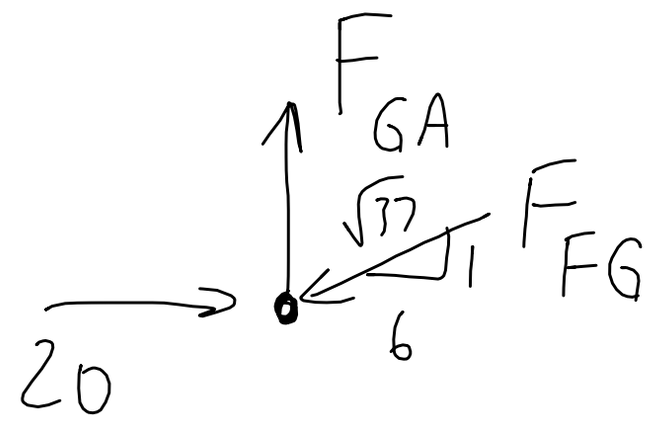
$$G_x = 20\ kN$$

By inspection, $A_x = 20\ kN$

$$A_y = 18\ kN$$

Pin G:

$$\stackrel{+}{\rightarrow} \sum F_x = 20 - F_{FG}\left(\frac{6}{\sqrt{37}}\right) = 0$$




$$F_{FG} = 20.26\ kN \ (C)$$

$$+\uparrow \sum F_y = F_{GA} - 20.26\left(\frac{1}{\sqrt{37}}\right) = 0$$

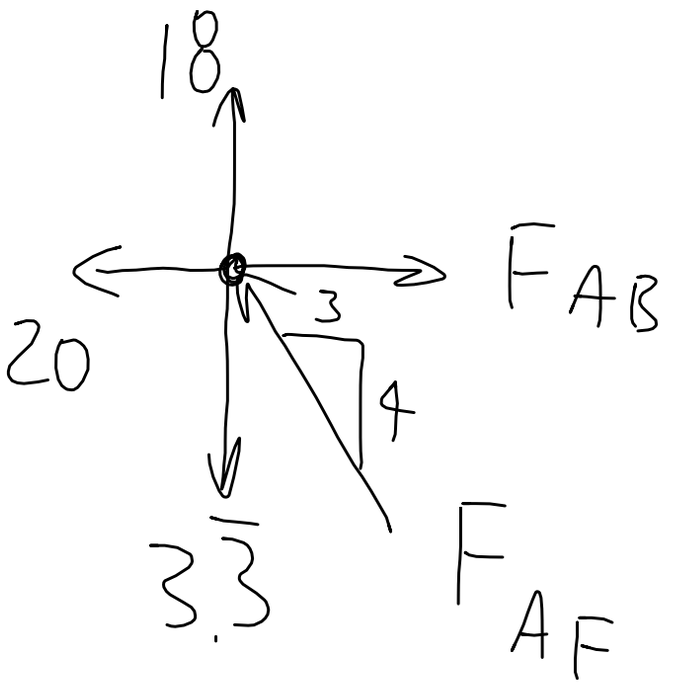
$$F_{GA} = 3.\overline{3}\ kN \ (T)$$

Pin A

$$+\uparrow \Sigma F_y = 18 - 3.\bar{3} + F_{AF}\left(\frac{4}{5}\right) = 0$$

$$F_{AF} = -18.3\ kN$$

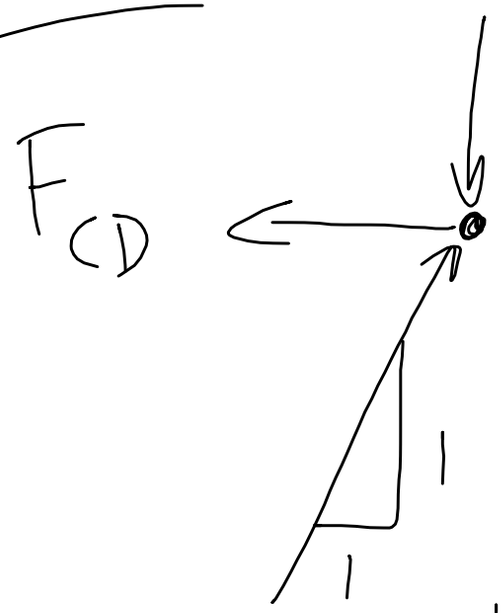
$$= 18.3\ kN\ (T)$$




$$\pm\rightarrow \Sigma F_x = F_{AB} - 20 + 18.3\left(\frac{3}{5}\right) = 0$$

$$F_{AB} = 9.02\ (T)$$

Pin D

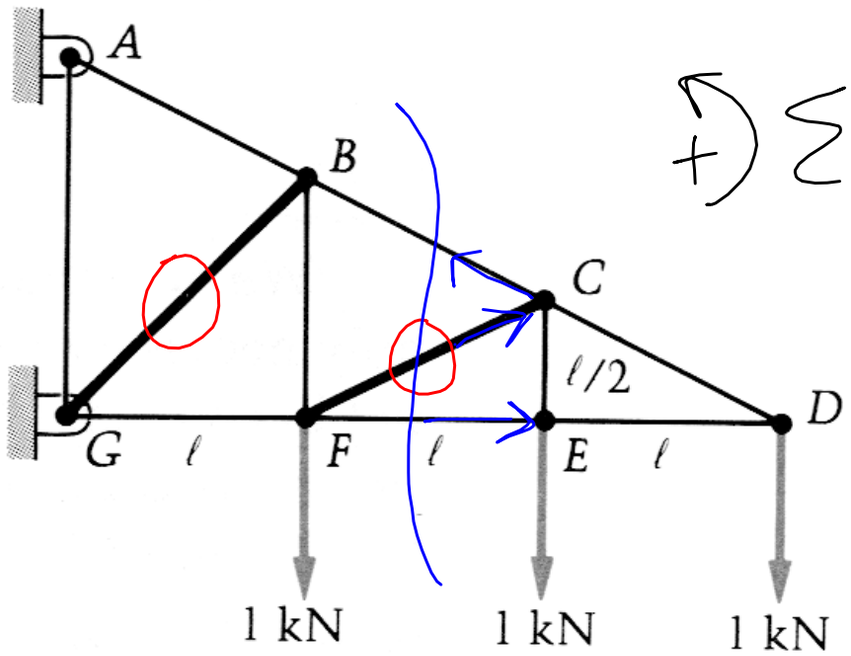



$+\uparrow \sum F_y = \frac{F_{ED}}{\sqrt{2}} - 3 = 0$

$F_{ED} = 3\sqrt{2}$ (C)

$\pm \rightarrow \sum F_x = \frac{3\sqrt{2}}{\sqrt{2}} - F_{CD} = 0$

$F_{CD} = 3\,kN$ (T)




$$+\circlearrowleft \sum M_C = F_{FE}\left(\frac{\ell}{2}\right) - 1(\ell) = 0$$

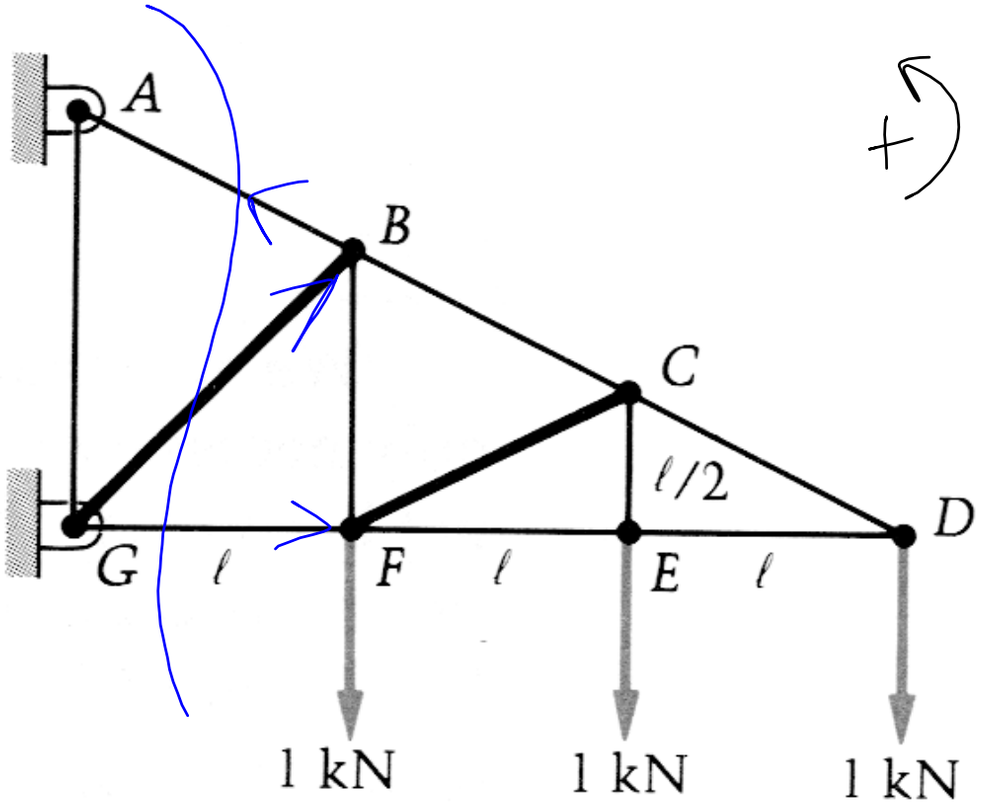
$$F_{FE} = 2\ kN \quad (C)$$

$$+\circlearrowleft \sum M_F = F_{CB}\frac{2}{\sqrt{5}}\frac{\ell}{2} + F_{CB}\frac{1}{\sqrt{5}}\ell - 1(\ell) - 1(2\ell) = 0$$

$$F_{CB} = \frac{3\sqrt{5}}{2}\ (T)$$

$$2\ kN \quad \sum F_y \Rightarrow F_{FC} = \frac{\sqrt{5}}{2}$$

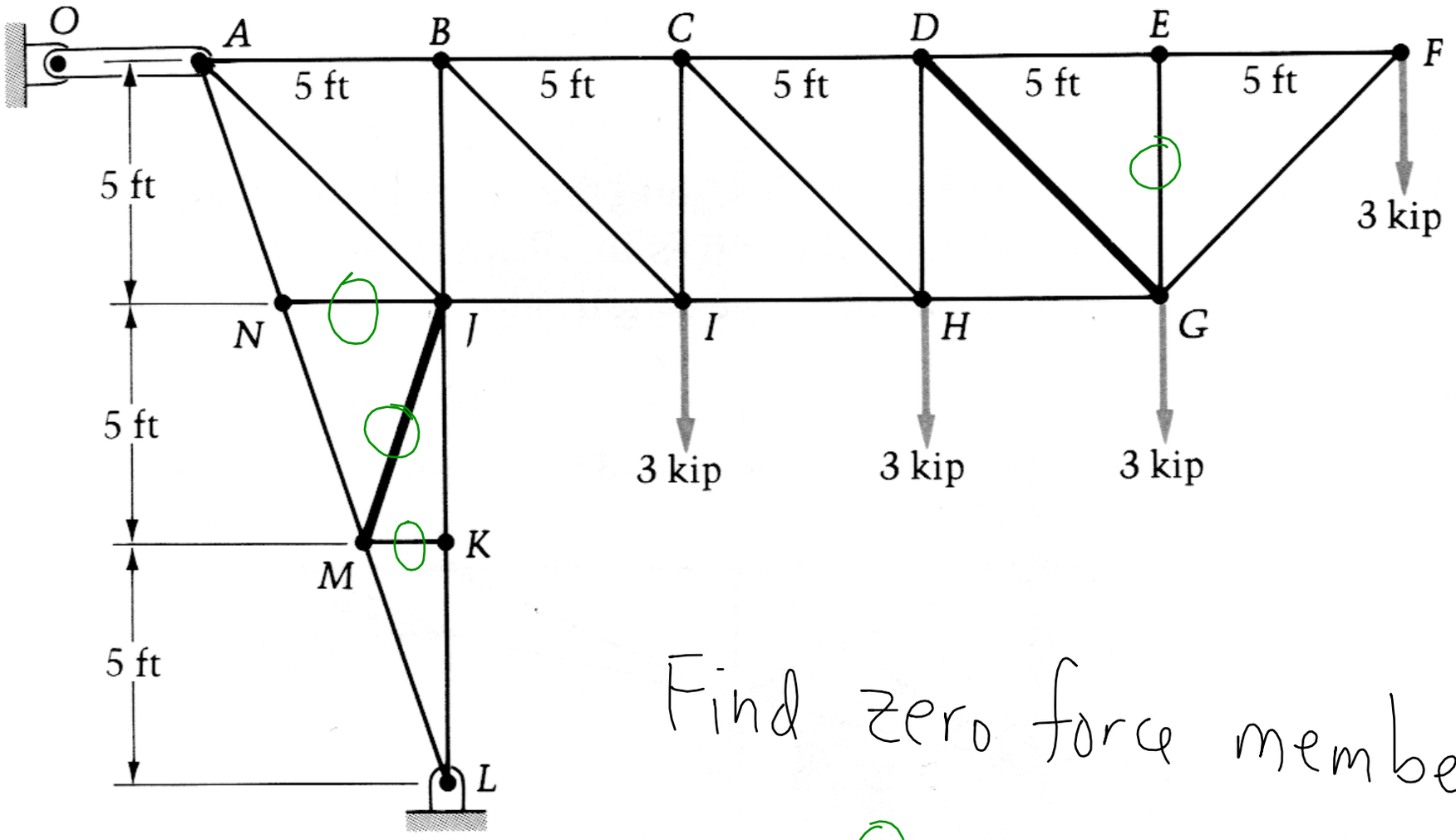
$$(C)$$




$$+\circlearrowleft \sum M_D = 1(\ell) + 1(2\ell)$$

$$-\frac{F_{GB}}{\sqrt{2}}(2\ell) - \frac{F_{GB}}{\sqrt{2}}(\ell) = 0$$

$$F_{GB} = \sqrt{2}\ kN \ (C)$$




Find zero force members

0