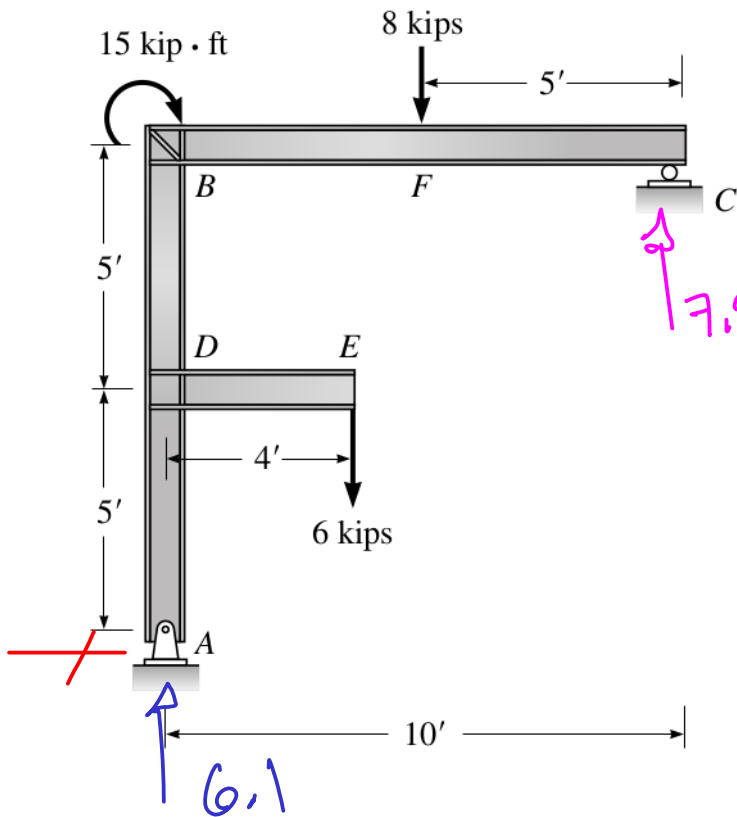


$$\sum M_A = \underbrace{8(4)}_{\text{bp}} + 5(4) \underbrace{\left(4 + 5 + \frac{4}{2}\right)}_{\text{bp}} - B_y(4 + 5 + 4) = 0$$

$$B_y = 19.38 \text{ K} \uparrow$$

$$\sum F_y = A_y - 8 - 5(4) + 19.38 = 0 \rightarrow A_y = 8.62 \text{ K} \uparrow$$

$$\sum F_x = A_x - 6 = 0 \rightarrow A_x = 6 \text{ K} \rightarrow$$



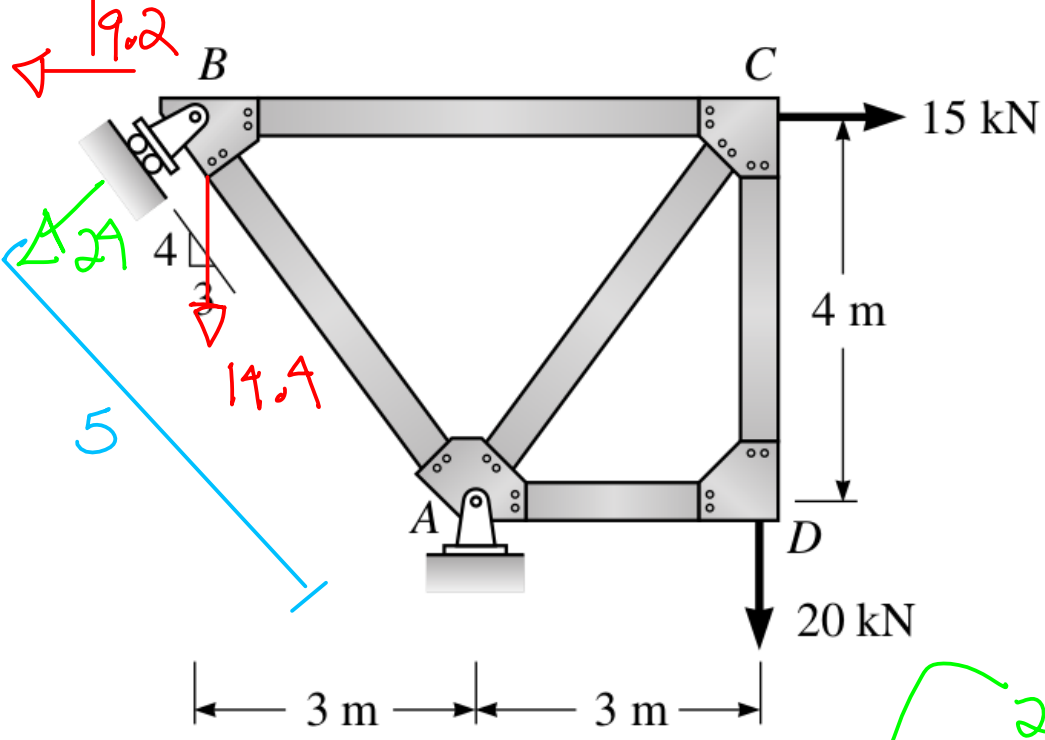
$$\sum M_A = 6(4) + 15 + 8(5) - C_y(10) = 0$$

$$C_y = 7.9 \text{ K} \uparrow$$

$$\sum F_y = A_y - 6 - 8 + 7.9 = 0$$

$$A_y = 6.1 \text{ K} \uparrow$$

$$\sum F_x = A_x = 0 \text{ K}$$

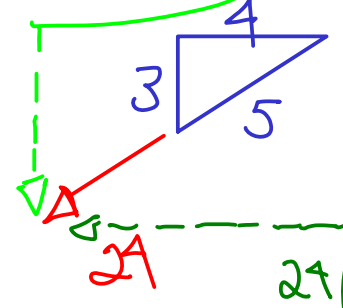
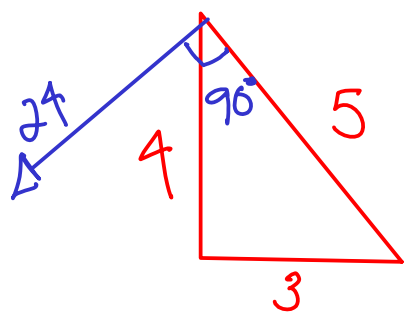


$$\sum M_A = 15(4) + 20(3) + B(5) = 0$$

$$B = -24 \nearrow$$

$$B = 24 \checkmark$$

$$2A \left( \frac{3}{5} \right) = \frac{72}{5} = 14.4$$



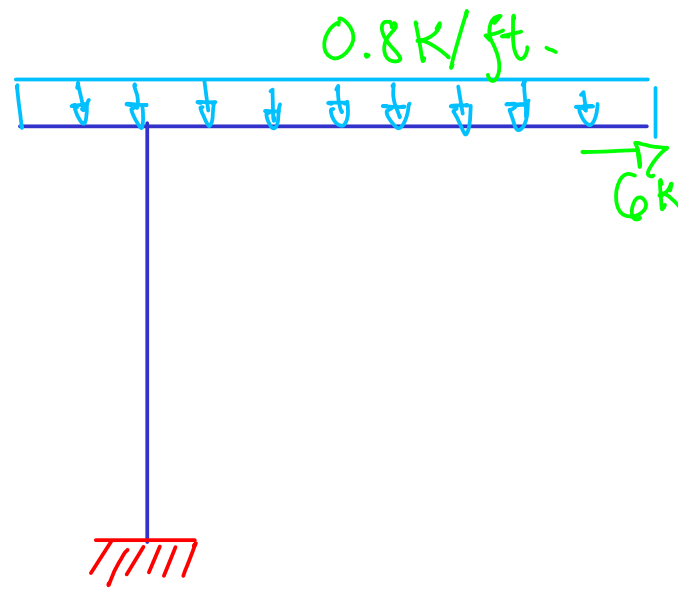
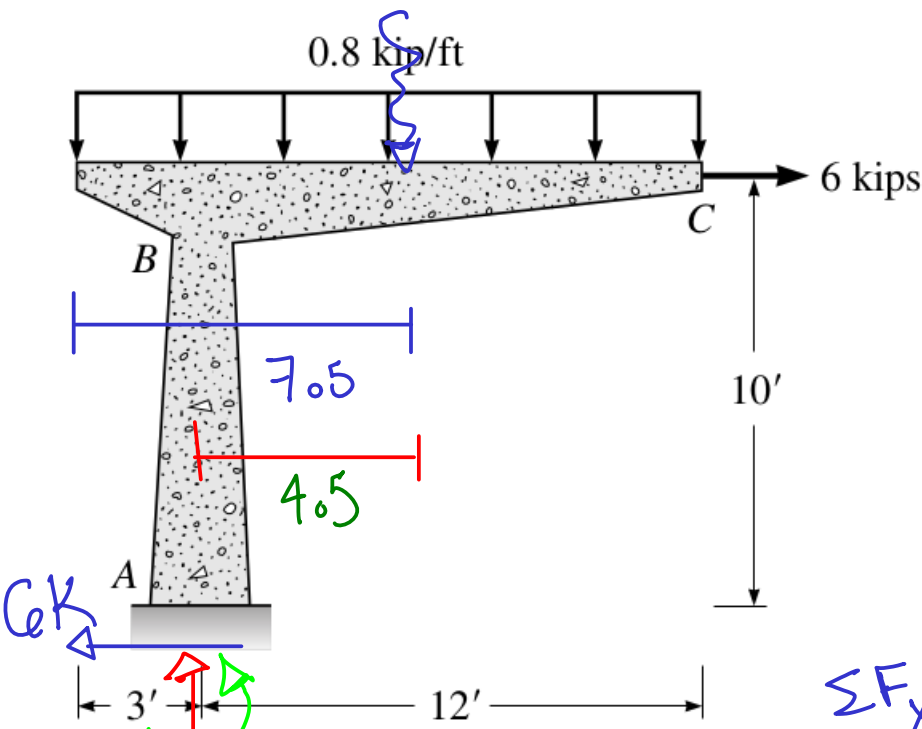
$$2A \left( \frac{4}{5} \right) = \frac{96}{5} = 19.2$$

$$\sum F_x = -19.2 + 15 + A_x = 0$$

$$A_x = 4.2 \text{ kN} \rightarrow$$

$$\sum F_y = -14.4 - 20 + A_y = 0$$

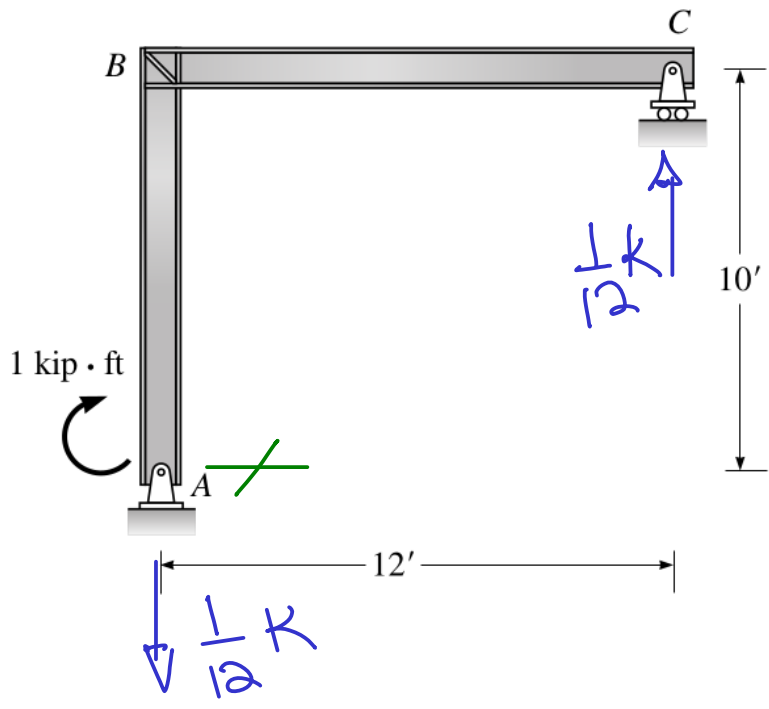
$$A_y = 34.4 \text{ kN} \uparrow$$



$$\sum F_x = -A_x + 6 = 0 \rightarrow A_x = 6 \text{ K} \leftarrow$$

$$\sum F_y = -0.8(15) + A_y = 0 \rightarrow A_y = 12 \text{ K} \uparrow$$

$$\sum M_z = (0.8)(15)(4.5) + 6(10) - M_A = 0 \rightarrow M_A = 114 \text{ Kft} \curvearrowleft$$



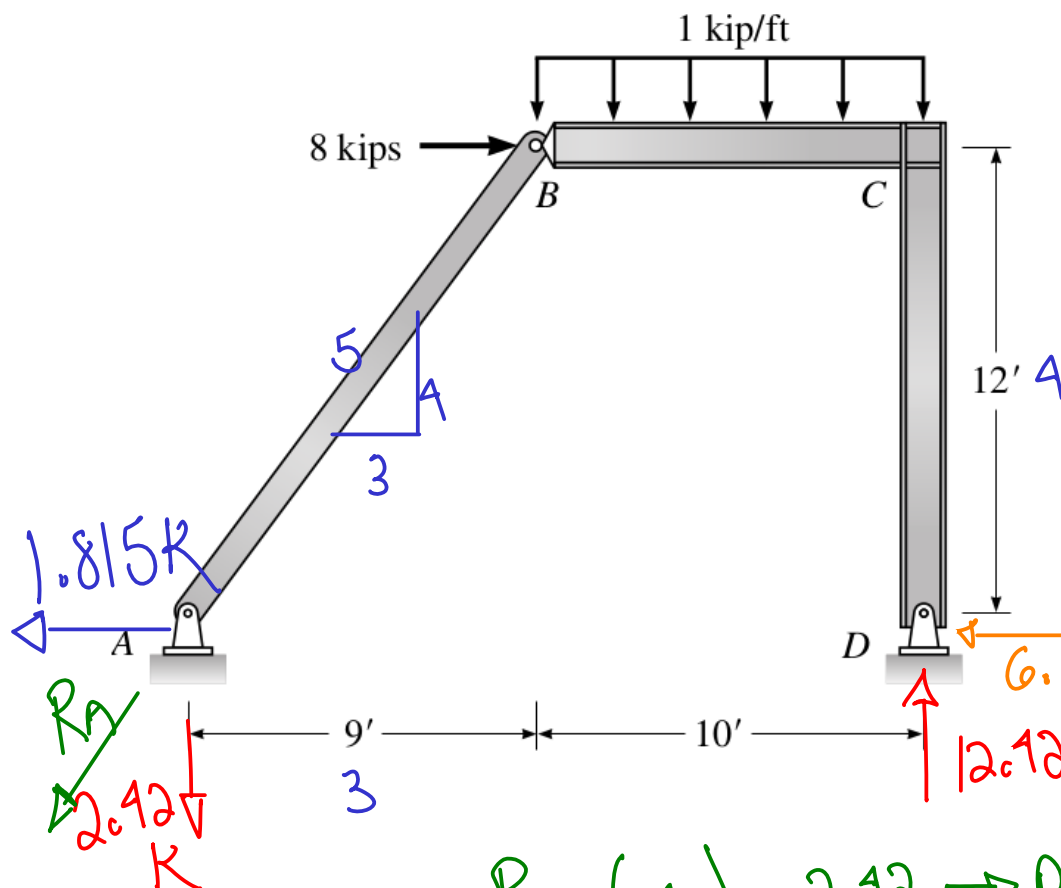
$$\sum M_A = 1 - C_y(12) = 0$$

$$C_y = \frac{1}{12} \text{ Kip} \uparrow$$

$$\sum F_y = -A_y + \frac{1}{12} = 0$$

$$A_y = \frac{1}{12} \text{ Kip} \downarrow$$

$$\sum F_x = C_x = 0 \text{ K}$$



$$\Sigma M_A = 8(12) + 1(10)(10/2 + 9) - D_y(19) = 0$$

$$D_y = 12.42 \text{ K} \uparrow$$

$$\Sigma F_y = A_y + 12.42 - (1)(10) = 0$$

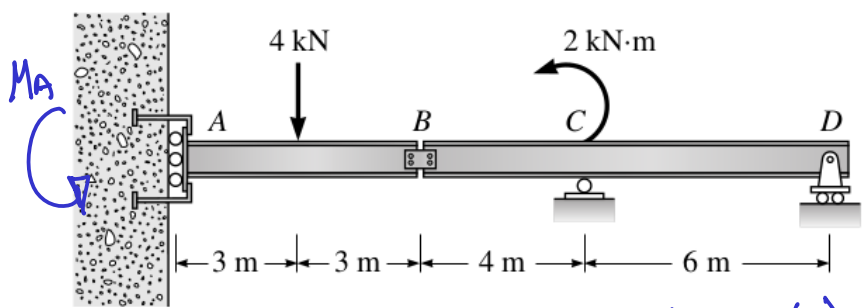
$$A_y = 2.42 \text{ K} \downarrow$$

$$\Sigma F_x = -1.815 + 8 - D_x = 0 \rightarrow D_x = 6.185 \text{ K} \leftarrow$$

$$R_A \left( \frac{4}{5} \right) = 2.42 \rightarrow R_A = 3.025 \text{ K}$$

$$3.025 \left( \frac{3}{5} \right) = R_{Ax} = 1.815 \text{ K} \leftarrow$$

$$\Sigma F_x = -1.815 + 8 - D_x = 0 \rightarrow D_x = 6.185 \text{ K} \leftarrow$$



$$\Sigma M_A = M_A - 4(3) = 0$$

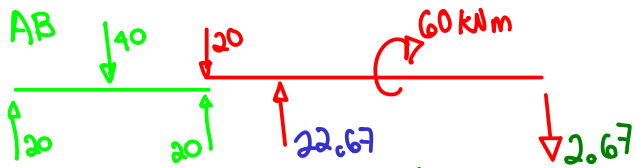
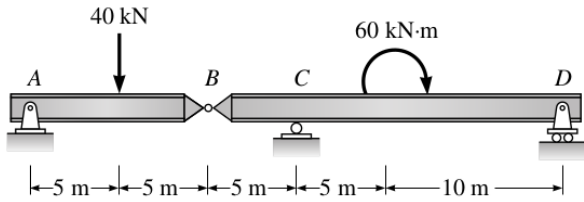
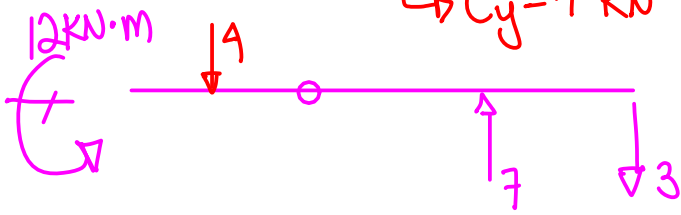
$$M_A = 12 \text{ kNm} \curvearrowright$$

$$\Sigma M_C = 2 + 4(1) - D_y(6) = 0$$

$$D_y = 3 \text{ kN} \downarrow$$

$$\Sigma F_y = -4 - 3 + C_y = 0$$

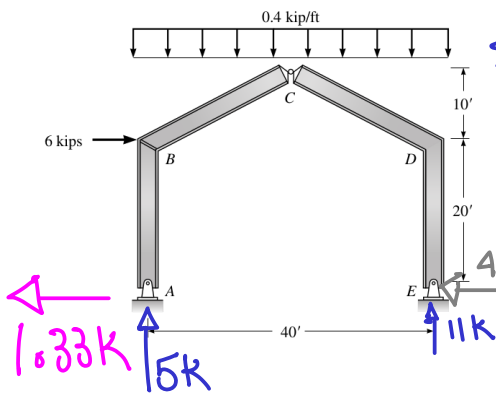
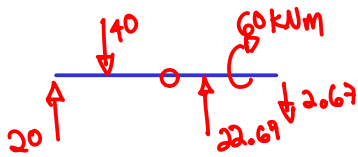
$$\hookrightarrow C_y = 7 \text{ kN} \uparrow$$



$$\Sigma M_C = 20(5) - 60 + D_y(15) = 0$$

$$D_y = -2.67 \uparrow = 2.67 \downarrow$$

$$\Sigma F_y = -20 + R_C - 2.67 = 0 \rightarrow R_C = 22.67 \text{ kN} \uparrow$$



$$\Sigma M_A = 6(20) + (0.4)(10)(20) - E_y(10) = 0$$

$$\hookrightarrow E_y = 11 \text{ k} \uparrow$$

$$\Sigma F_y = -0.4(40) + A_y + 11 = 0$$

$$\hookrightarrow A_y = 5 \text{ k} \uparrow$$

$$\Sigma M_C = (0.4)(20)(10) - 11(20) + E_x(30) = 0$$

$$E_x = 4.67 \quad E_x = 4.67 \text{ k} \leftarrow$$

$$\Sigma F_x = -A_x - 4.67 + 6 = 0$$

$$\hookrightarrow A_x = 1.33 \text{ k} \leftarrow$$