

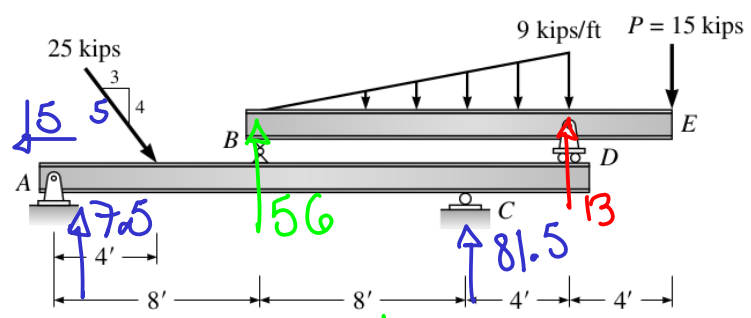
Tramo AD

$$\sum M_A = B_x(8) + 45\left(\frac{1}{3} \cdot 10\right) + 35(10) = 0$$

$$B_x = 62.5 \leftarrow$$

$$\sum F_x = -62.5 + A_x = 0 \rightarrow A_x = 62.5 \rightarrow$$

$$\sum F_y = -45 - 35 + A_y = 0 \rightarrow A_y = 80 \text{ K} \uparrow$$



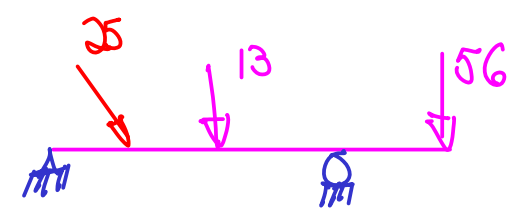
Viga de arriba

$$\sum M_B = \frac{1}{2}(12)(9)\left(\frac{2}{3} \cdot 12\right) + 15(16) - D_y(12) = 0$$

$$D_y = 56 \text{ K} \uparrow$$

$$\sum F_y = -\frac{1}{2}(12)(9) - 15 + 56 + B_y = 0$$

$$B_y = 13 \text{ K} \uparrow$$



Viga de abajo

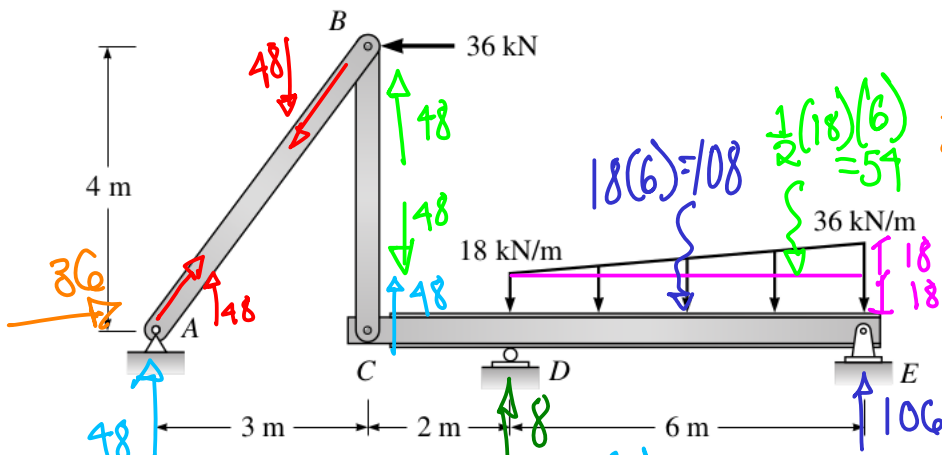
$$\sum M_A = 25 \left(\frac{4}{5} \right) (4) + 13 (8) + 56 (20) - C_y (16) = 0$$

$$C_y = 81.5 \text{ kN} \uparrow$$

$$\sum F_y = -25 \left(\frac{4}{5} \right) - 13 - 56 + 81.5 + A_y = 0$$

$$A_y = 7.5 \text{ kN} \uparrow$$

$$\sum F_x = 25 \left(\frac{3}{5} \right) - A_x = 0 \rightarrow A_x = 15 \text{ kN} \leftarrow$$



Segmento AC

$$\sum F_x = -36 + A_x = 0$$

$$A_x = 36 \rightarrow$$

$$36(4) = \chi(3)$$

$$\chi = 48$$

$$\sum M_C = 0 = 36(4) - A_y(3) = 0 \rightarrow A_y = 48 \text{ kN} \uparrow$$

Viga CE

$$\sum M_E = 108 \left(\frac{6}{2} \right) + 54 \left(\frac{1}{3} \cdot 6 \right) - D_y(6) - 48(8) = 0$$

$$D_y = 8 \text{ kN} \uparrow$$

$$\sum F_y = 8 \uparrow 48 - 108 - 54 + E_y = 0 \rightarrow E_y = 106 \text{ kN} \uparrow$$