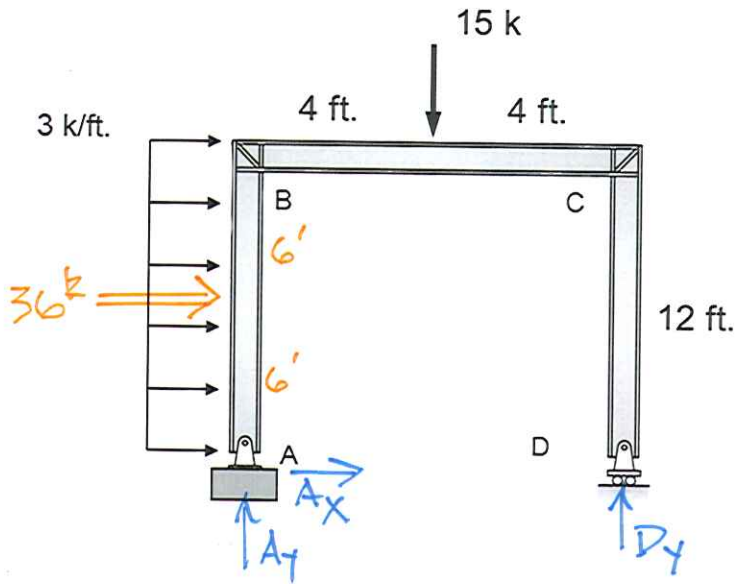


Example 4d-1: Draw the shear and moment diagrams for the following frame:

1/2

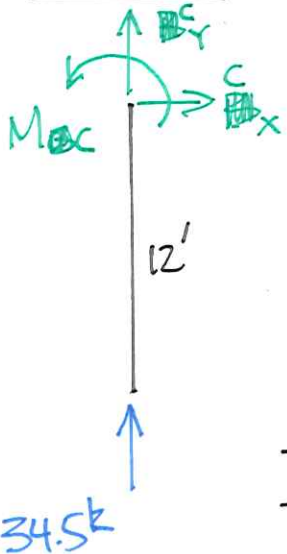


$$\sum M_A = 0 = -36^k(6') - 15^k(4') + D_y(8') \quad \underline{D_y = 34.5^k}$$

$$+\uparrow \sum F_y = 0 = A_y + D_y - 15^k \quad \underline{A_y = -19.5^k}$$

$$+\rightarrow \sum F_x = 0 = A_x + 36^k \quad \underline{A_x = -36^k}$$

FBD CD



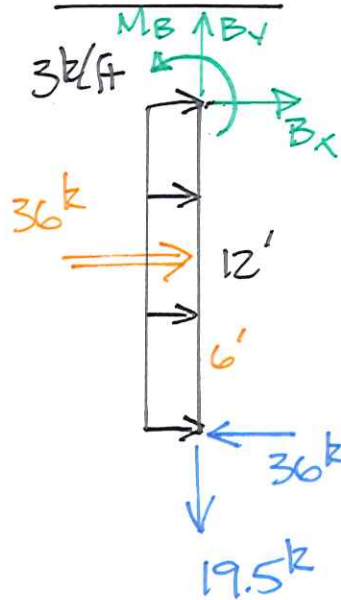
$$\sum M_C = 0 = M_C$$

$$+\uparrow \sum F_y = 0 = C_y + 34.5^k$$

$$\underline{C_y = -34.5^k}$$

$$+\rightarrow \sum F_x = 0 = C_x$$

FBD AB



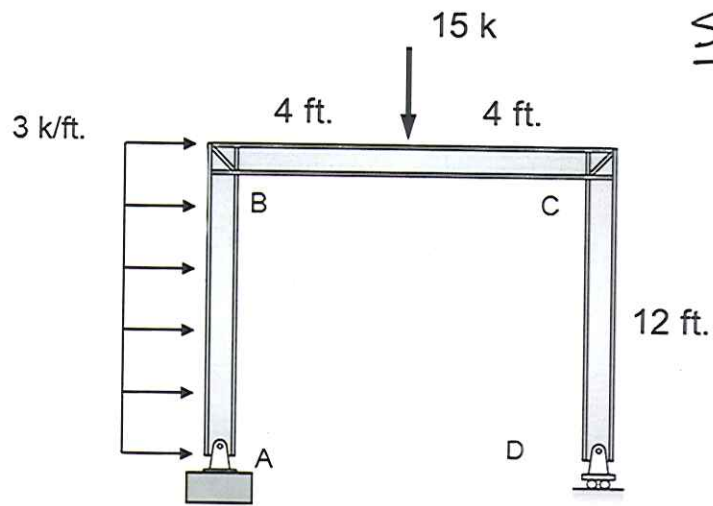
$$\sum M_B = 0 = M_B + 36^k(6') - 36^k(12') \quad \underline{M_B = +216^k \text{ ft}}$$

$$+\uparrow \sum F_y = 0 = B_y - 19.5^k \quad \underline{B_y = 19.5^k}$$

$$+\rightarrow \sum F_x = 0 = B_x + 36^k - 36^k \quad \underline{B_x = 0}$$

Example 4d-1: Draw the shear and moment diagrams for the following frame:

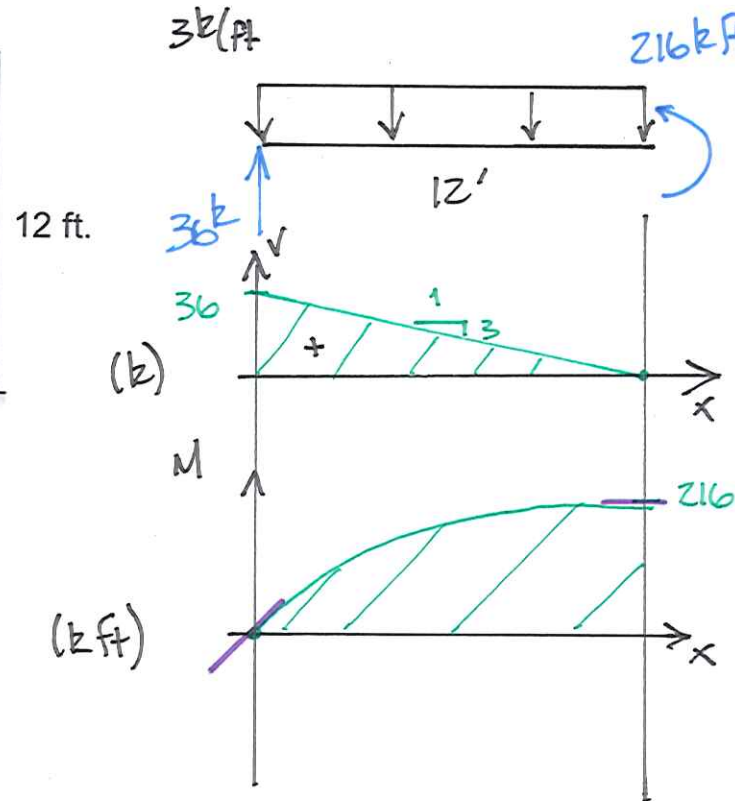
2/2



$$\Delta V = \int w dx \quad \frac{dV}{dx} = w$$

$$\Delta M = \int V dx \quad \frac{dM}{dx} = V$$

SECTION AB



SECTION BC

