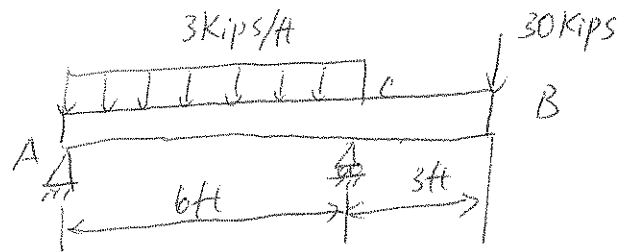
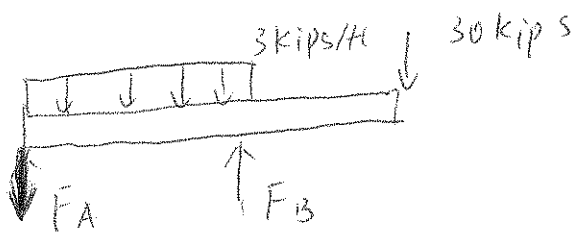


12.7 draw M and V diagram

find M_{max} and V_{max}

FBD:



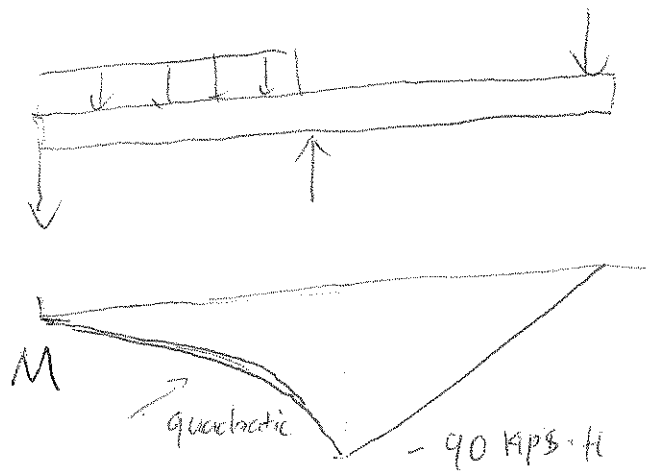
$$\textcircled{1} \sum F_y = 0 \Rightarrow F_A + 3 \text{ kips/ft} \cdot 6 \text{ ft} + 30 - F_B = 0$$

$$\textcircled{2} \sum M_A = 0 \Rightarrow F_B \cdot 6 \text{ ft} - 30 \text{ kips} \cdot 9 \text{ ft} - (3 \text{ kips/ft} \cdot 6 \text{ ft}) \cdot 3 \text{ ft} = 0$$

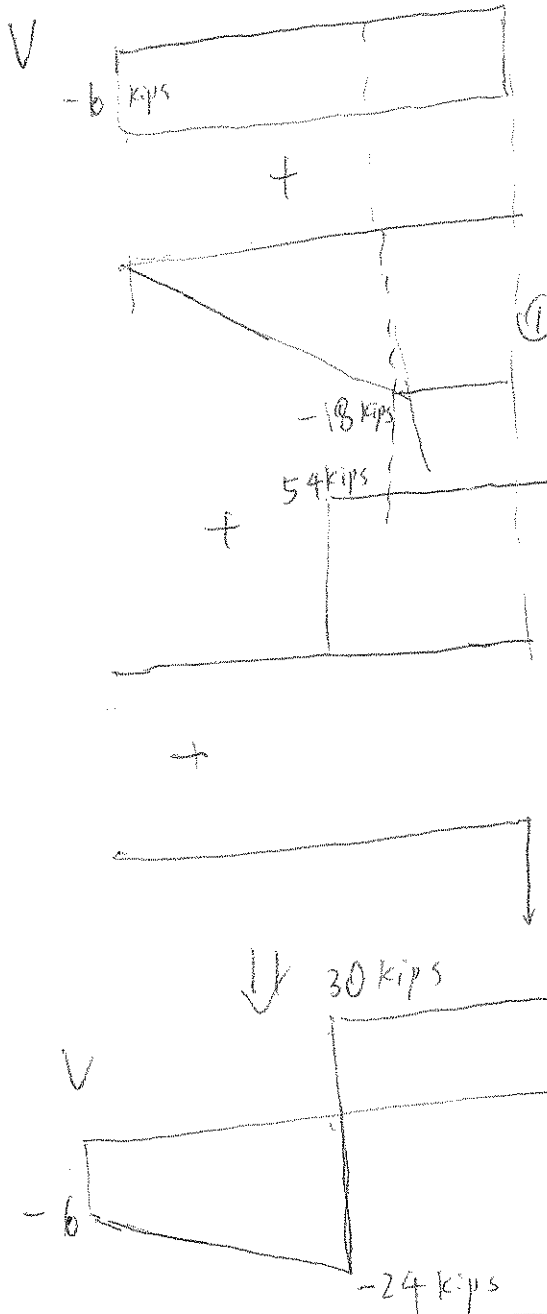
$$\textcircled{1} \textcircled{2} \Rightarrow F_B = 54 \text{ kips}$$

$$F_A = 6 \text{ kips}$$

Moment:



$$M_{max} = -90 \text{ kips} \cdot \text{ft}$$



$$V_{max} = +30 \text{ kips}$$