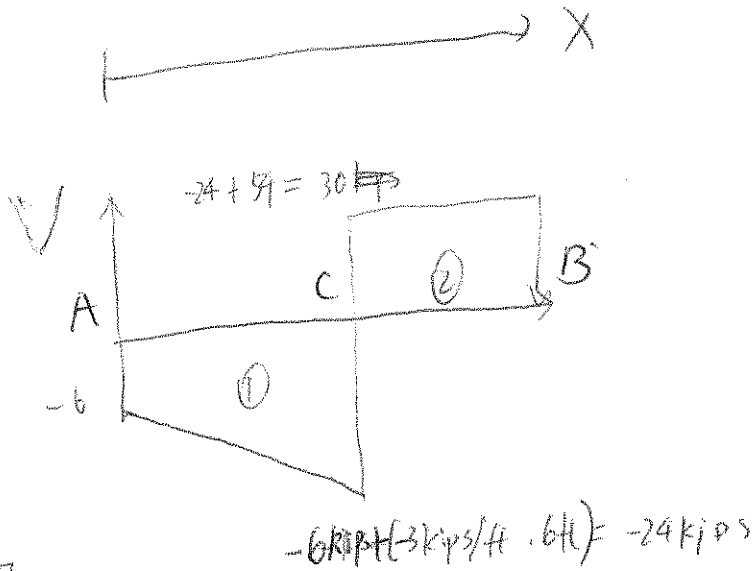
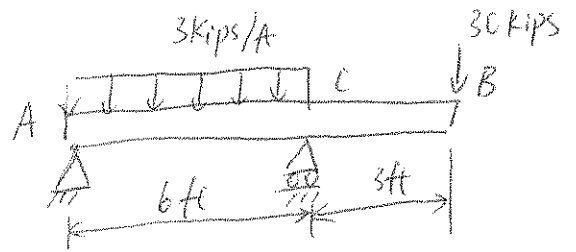


12.35

$V_{max} = ?$
 $M_{max} = ?$

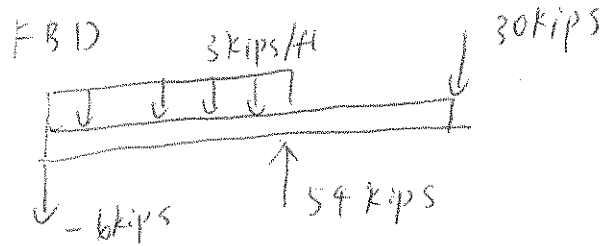


In ① $V = V_0 - \int_0^x w(x') dx'$
 $= -6 - 3x$

In ② $V(x) = V(6ft) + 54 \text{ kips}$
 $= 30 \text{ kips}$

So $V(x) = \begin{cases} -6 - 3x & 0 < x < 6 \\ 30 & 6 < x < 9 \end{cases}$

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



In ① $M = M_0 + \int_0^x V(x') dx'$
 $= 0 - 6x - \frac{3}{2}x^2$
 $= -6x - \frac{3}{2}x^2 \quad (0 \leq x \leq 6)$

In ② $M = M(6ft) + \int_6^{(x-6)} 30 dx'$
 $= -90 + 30(x-6)$
 $(6 \leq x \leq 9)$

