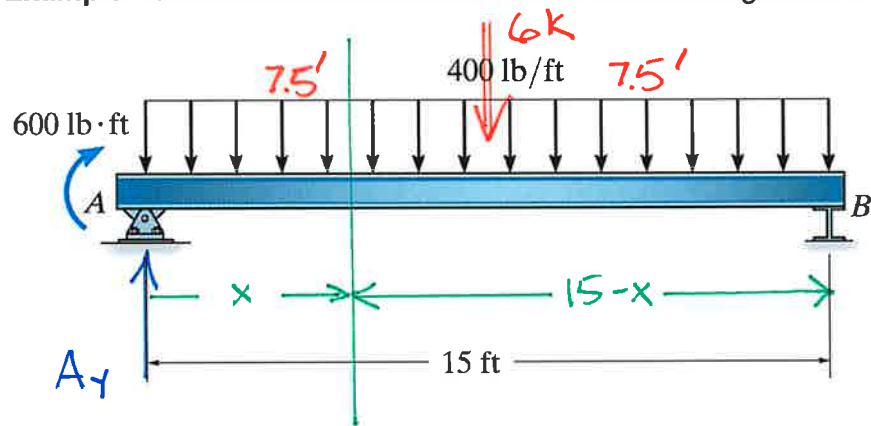
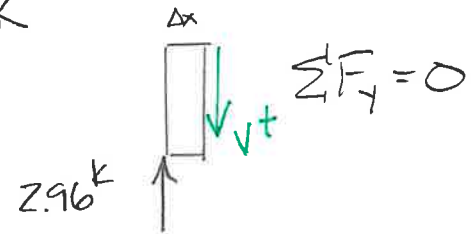
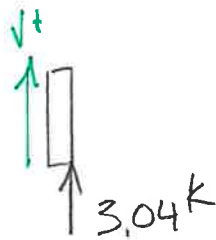


Example 4b-2 - Determine the internal shear and bending moment as a function of x .



$$\sum M_B = 0 = 6k(7.5') - 0.6kft - A_y(15')$$

$$A_y = 2.96k$$

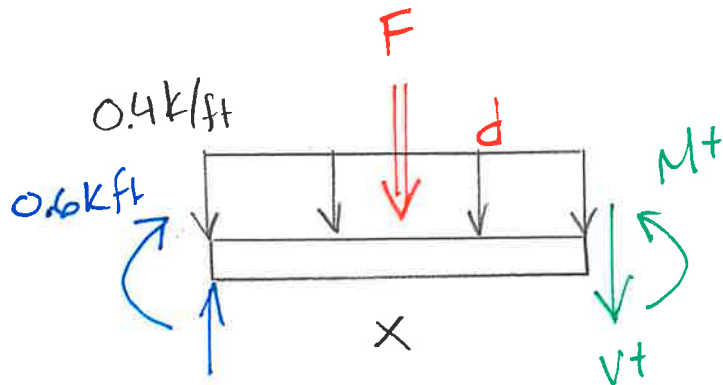


$$\sum M_{cut} = 0 = M + Fd - 2.96k(x) - 0.6kft$$

$$M = \underline{\underline{[-0.2x^2 + 2.96x + 0.6] kft}}$$

$$M(x=0) = 0.6kft \checkmark$$

$$M(x=15) = 0 \checkmark$$



$$d = \frac{x}{2}$$

$$F = 0.4k/ft(x)$$

$$\sum F_y = 0 = -V - 0.4x + 2.96k$$

$$V = \underline{\underline{[-0.4x + 2.96] k}}$$

$$\frac{dM}{dx} = V \checkmark$$

$$V(x=0) = 2.96k \checkmark$$

$$V(x=15) = -3.04k \checkmark$$