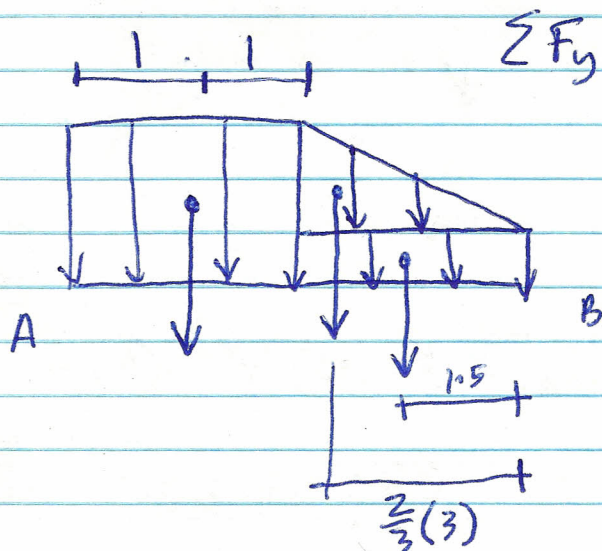
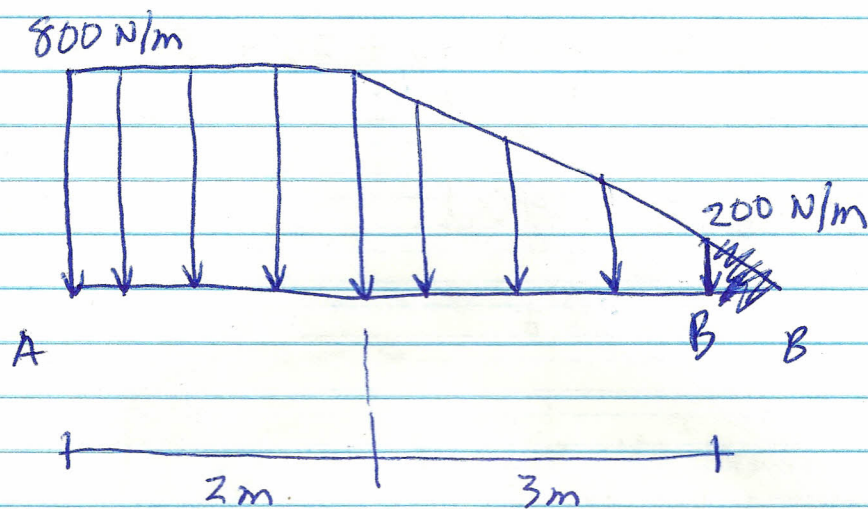


Reduction of a Simple Distributed loading

4-144



$$\begin{aligned} \sum F_y = W &= 800(2) \\ &+ \frac{1}{2}(800+200)(3) \\ &= 3100 \text{ N} \end{aligned}$$

$$\sum M_B = W \bar{x}$$

$$\begin{aligned} 800(2)(3+1) + \frac{1}{2}(800-200)(3)(2) + 200(3)(1.5) \\ = 3100 \bar{x} \end{aligned}$$

$$\Rightarrow \bar{x} = 2.935 \text{ m from B.}$$