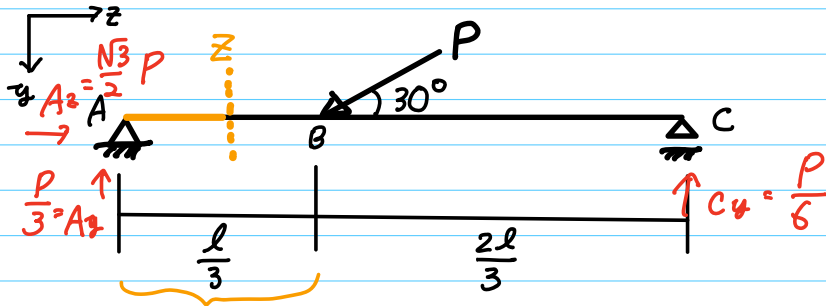
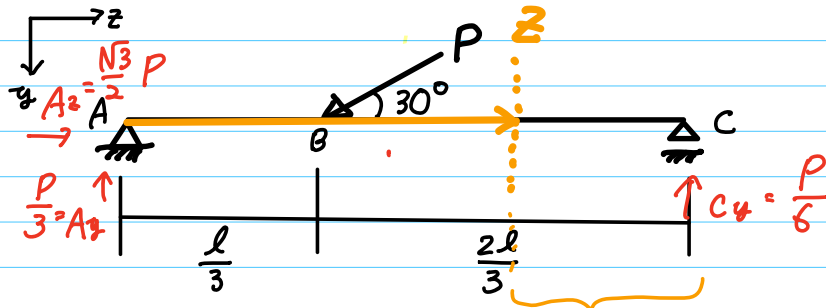


① $0 \leq z \leq \frac{l}{3}$



$$\begin{aligned} \sum \vec{x}: \frac{\sqrt{3}}{2} P + N &= 0 & N &= -\frac{\sqrt{3}}{2} P \\ \sum \vec{z}: \frac{P}{3} - S &= 0 & S &= \frac{P}{3} \\ \sum M: M - \frac{P}{3} z &= 0 & M &= \frac{P}{3} z \end{aligned}$$

② $\frac{l}{3} \leq z \leq l$



$$\begin{aligned} \sum \vec{x}: -N &= 0 & N &= 0 \\ \sum \vec{z}: S + \frac{P}{6} &= 0 & S &= -\frac{P}{6} \\ \sum M: -M + \frac{P}{6} (l - z) &= 0 & M &= \frac{P}{6} (l - z) \end{aligned}$$

まとめ

$$N(z) \begin{cases} = -\frac{\sqrt{3}}{2} P & (0 \leq z \leq \frac{l}{3}) \\ = 0 & (\frac{l}{3} \leq z \leq l) \end{cases}$$

$$S(z) \begin{cases} = \frac{P}{3} & (0 \leq z \leq \frac{l}{3}) \\ = -\frac{P}{6} & (\frac{l}{3} \leq z \leq l) \end{cases}$$

$$M(z) \begin{cases} = \frac{P}{3} z & (0 \leq z \leq \frac{l}{3}) \\ = \frac{P}{6} (l-z) & (\frac{l}{3} \leq z \leq l) \end{cases}$$