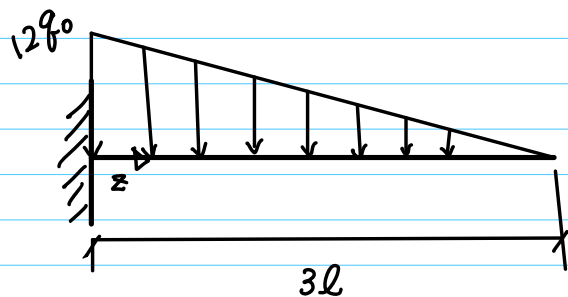
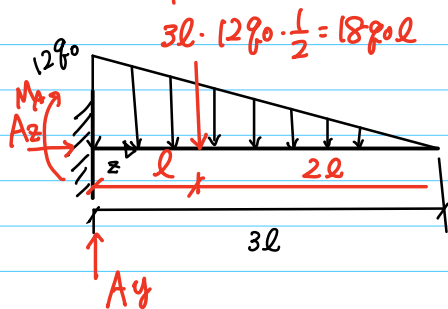


小テスト第8回



解答

反力用におきかえろ



$$3l \cdot 12q_0 \cdot \frac{1}{2} = 18q_0l$$

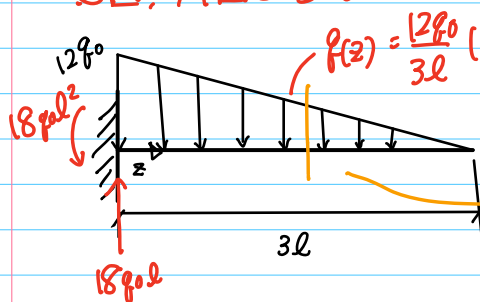
$$\uparrow \Sigma: A_y - 18q_0l = 0$$

$$A_y = 18q_0l$$

$$\curvearrowleft \Sigma M_A: M_A + 18q_0l \cdot l = 0$$

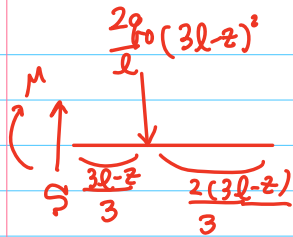
$$M_A = -18q_0l^2$$

S図, M図を考慮 \rightarrow 場合分け不要



$$q(z) = \frac{12q_0}{3l}(3l-z) = \frac{4q_0}{l}(3l-z)$$

$$\begin{aligned} & \frac{4q_0}{l}(3l-z) \cdot \frac{1}{2} \Rightarrow (3l-z) \cdot \frac{4q_0}{l}(3l-z) \cdot \frac{1}{2} \\ & = \frac{2q_0}{l}(3l-z)^2 \end{aligned}$$



$$\uparrow \Sigma: S - \frac{2q_0}{l}(3l-z)^2$$

$$S'(z) = \frac{2q_0}{l}(3l-z)^2 \quad (0 \leq z \leq 3l)$$

$$S'(0) = 18q_0l, \quad S'(3l) = 0$$

$$\uparrow \Sigma M: M + \frac{2q_0}{l}(3l-z)^2 \cdot \frac{(3l-z)}{3} = 0 \quad \frac{-2q_0}{3l}(3l-z)^3$$

$$M(z) = -\frac{2q_0}{3l}(3l-z)^3 \quad (0 \leq z \leq 3l)$$

$$M(0) = -\frac{2q_0}{3l}(3l)^3 = -18q_0l^2 \quad M(3l) = 0$$

