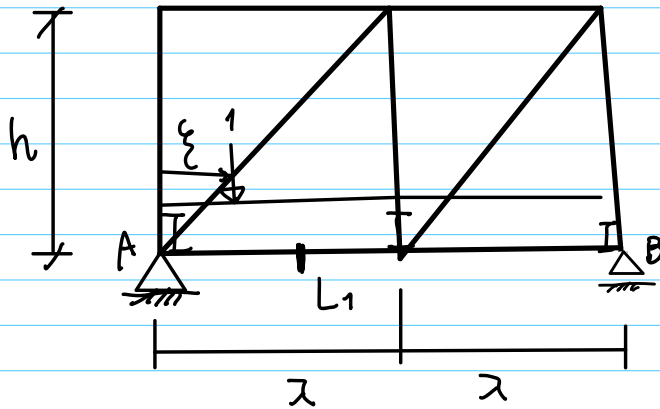
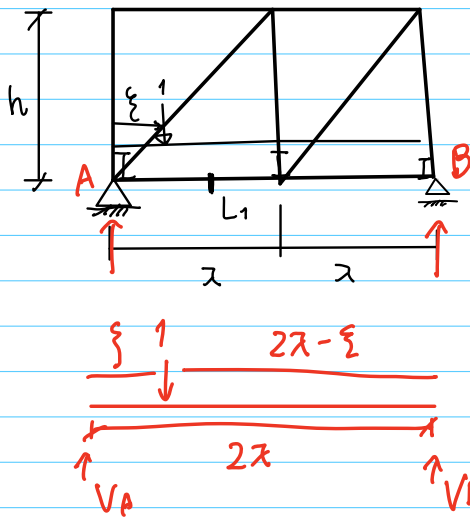


小テスト第15回 解答



①反力を求める



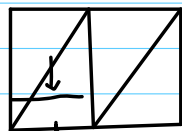
$L_1(\xi)$ の影響線を求めるとき
 反力を求める。

$$V_B = \frac{\xi}{2\lambda}$$

$$V_A = \frac{2\lambda - \xi}{2\lambda}$$

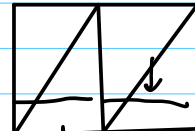
②場合分け

①



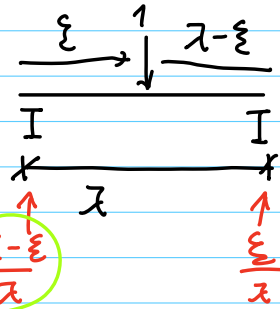
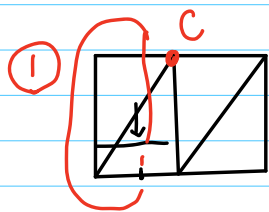
着目点はある
 $(0 \leq \xi \leq \lambda)$

②



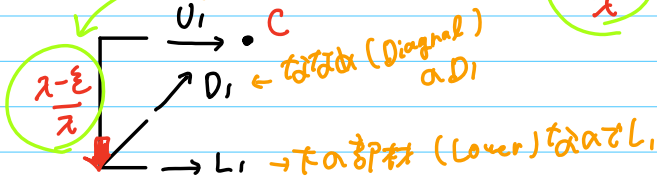
右側にある
 $(\lambda \leq \xi \leq 2\lambda)$

① 着目点=ある \Rightarrow 荷重が真上にある場合の
 $(0 \leq \xi \leq \lambda)$ 間接載荷を考へる



$$\frac{2\lambda - \xi}{2\lambda}$$

上α部材 (Upper) となるU₁



$$\frac{\lambda - \xi}{\lambda}$$

$$\sum M_C = \frac{\lambda - \xi}{\lambda} \cdot \lambda + L_1 \cdot h - \frac{2\lambda - \xi}{2\lambda} \cdot \lambda = 0$$

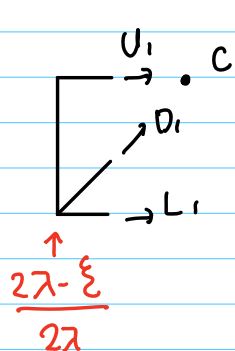
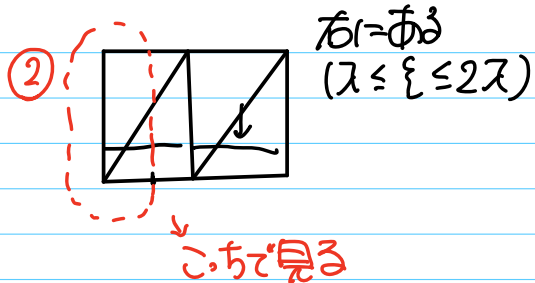
$$\lambda - \xi + L_1 \cdot h - \frac{2\lambda - \xi}{2} = 0$$

$$L_1 \cdot h = \frac{2\lambda - \xi}{2} - (\lambda - \xi)$$

$$= \frac{2\lambda - \xi - 2\lambda + 2\xi}{2}$$

$$L_1 \cdot h = \frac{\xi}{2} \quad L_1 = \frac{\xi}{2h}$$

$$(0 \leq \xi \leq \lambda)$$

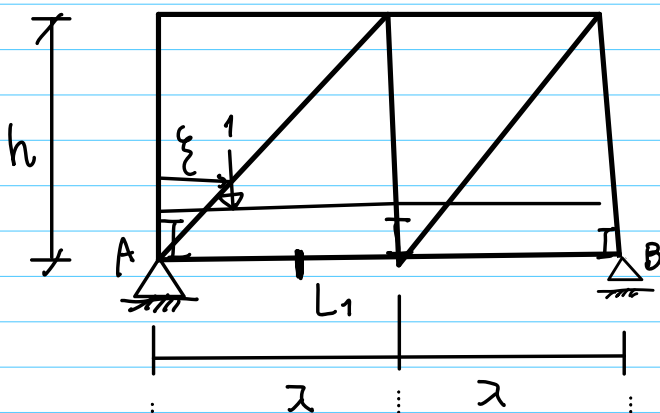


$$\downarrow M_c = -\frac{2\lambda - \xi}{2\lambda} \cdot \lambda + L_1 \cdot h = 0$$

$$L_1 \cdot h = \frac{2\lambda - \xi}{2}$$

$$L_1 = \frac{2\lambda - \xi}{2h}$$

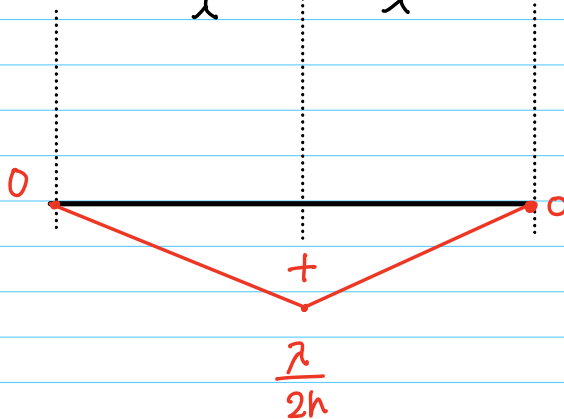
$$(\lambda \leq \xi \leq 2\lambda)$$



$$L_1 = \frac{\xi}{2h}$$

$$\xi = 0 \quad L_1 = 0$$

$$\xi = \lambda \quad L_1 = \frac{\lambda}{2h}$$



$$\frac{2\lambda - \xi}{2h}$$

$$\xi = \lambda \quad \frac{2\lambda - \lambda}{2h} = \frac{\lambda}{2h}$$

$$\xi = 2\lambda \quad \frac{2\lambda - 2\lambda}{2h} = 0$$