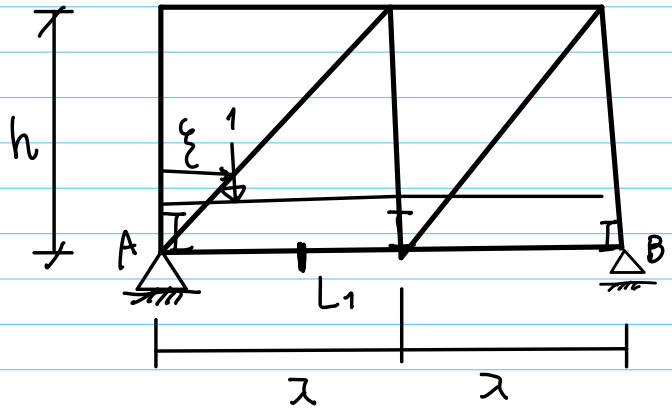
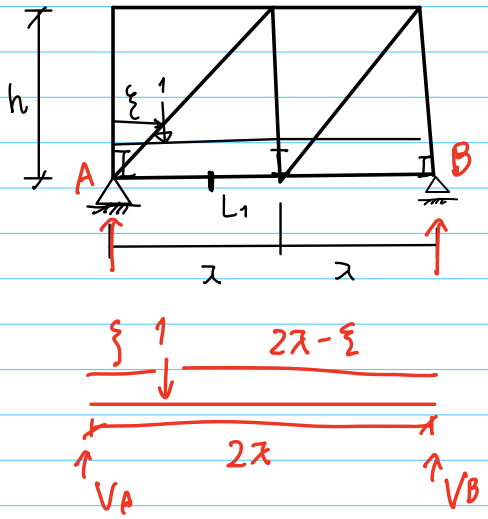
小テスト第15回　解答



①反力を求める



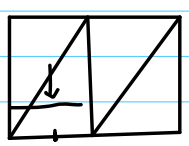
$L_1(\xi)$の影響線を求めるため
まず反力をもとめる。

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

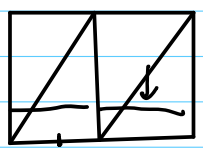
$$V_A = \frac{2\lambda - \xi}{2\lambda}$$

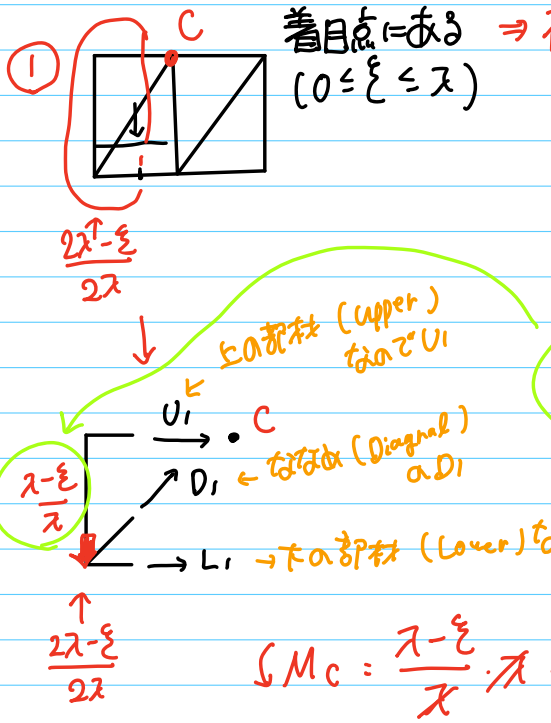
②場合わけ

① 着目点にある
$(0 \leq \xi \leq \lambda)$



② 右にある
$(\lambda \leq \xi \leq 2\lambda)$





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

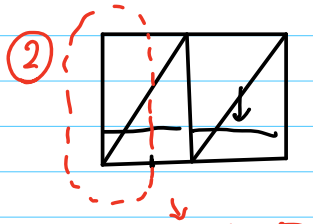
$$\lambda - \xi + L_1\cdot h - \frac{2\lambda-\xi}{2} = 0$$

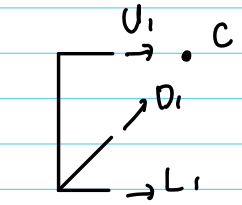
$$L_1 h = \frac{2\lambda-\xi}{2} - (\lambda-\xi)$$

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

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

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





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

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

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

$(\lambda \le \xi \le 2\lambda)$