

$$D_k = \begin{bmatrix} \theta & 2\theta \\ \theta & 2\theta \\ \theta & 3\theta \end{bmatrix}$$

ⓐ RIGID JOINTS

$$V_n = \frac{(LL + DL) (L)}{2}$$

$$M_n = \frac{(LL + DL) (L)^2}{12}$$

θ	1
$-(V_1 + V_2)$	2
$M_1 - M_2$	3
θ	4
$-(V_2 + V_3)$	5
$M_2 - M_3$	6
θ	7
$-(V_3 + V_4)$	8
$M_3 - M_4$	9
θ	10
$-(V_4 + V_5)$	11
$M_4 - M_5$	12
θ	13
$-(V_5 + V_6)$	14
$M_5 - M_6$	15
θ	16
$-(V_7 + V_8)$	17
$M_8 - M_7$	18
θ	19
$-(V_8 + V_9)$	20
$M_9 - M_8$	21
θ	22
$-(V_9 + V_{10})$	23
$M_{10} - M_9$	24
θ	25
$M_6 + M_7$	26
$-(M_1 + M_{10})$	27

$Q_k =$

