

	A	B	C	D	E	F	G	H	
(a)	2	3	1	3	2	4	3	4	2.75 (평균)
(b)	4	3	2	3	1	3	2	3	2.625 (평균)
(c)	8	7	6	5	4	3	2	1	4.5 (평균)

$$P(A)=0.1 \quad P(B)=0.3 \quad P(C)=0.6$$

$$\begin{array}{c} (A) \\ | \\ (C) \end{array} = 1 \times 0.1 + 2 \times 0.6 + 3 \times 0.3 = 2.2$$

$$\begin{array}{c} (C) \\ | \\ (A) \\ | \\ (B) \end{array} = 0.6 \times 1 + 0.1 \times 2 + 0.3 \times 3 = 1.7$$

$$\begin{array}{c} (B) \\ | \\ (A) \quad (C) \end{array} = 0.3 \times 1 + 2(0.1 + 0.6) = 1.7$$

$$\begin{array}{c} (A) \\ | \\ (B) \\ | \\ (C) \end{array} = 1 \times 0.1 + 2 \times 0.3 + 3 \times 0.6 = 2.5$$

$$\begin{array}{c} (C) \\ | \\ (B) \\ | \\ (A) \end{array} = 1 \times 0.6 + 2 \times 0.3 + 3 \times 0.1 = 1.5 \quad \text{--- 최작}$$

$$A[i, j] = \min_{i \leq k \leq j} (A[i, k-1] + A[k+1, j] + \sum_{q=i}^j P(a_q))$$

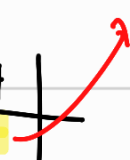
$$P(A)=0.3, P(B)=0.2, P(C)=0.4, P(D)=0.1$$

$A[i, j]$

	1	2	3	4
1	0.3	0.7	1.6	1.8
2		0.2	0.8	1
3			0.4	0.6
4				0.1

$k$

	1	2	3	4
1	1	1	2	3
2		2	3	3
3			3	3
4				4

root 

$$A[1, 2] = \min_{1 \leq k \leq 2}$$

$$k=1 \quad (A[1, 0] + A[2, 2] + P_1 + P_2) = 0 + 0.2 + 0.5 = 0.7$$

$$k=2 \quad (A[1, 1] + A[3, 2] + P_1 + P_2) = 0.3 + 0 + 0.5 = 0.8$$

$$A[2,3] = \min_{2 \leq k \leq 3}$$

$$k=2 \quad A[2,1] + A[3,3] + P_2 + P_3 = 0 + 0.4 + 0.6 = 1$$

$$k=3 \quad A[2,2] + A[4,3] + P_2 + P_3 = 0.2 + 0.6 = 0.8$$

$$A[3,4] = \min_{3 \leq k \leq 4}$$

$$k=3 \quad A[3,2] + A[4,4] + P_3 + P_4 = 0 + 0.1 + 0.5 = 0.6$$

$$k=4 \quad A[3,3] + A[5,4] + P_3 + P_4 = 0.4 + 0.5 = 0.9$$

$$A[1,3] = \min_{1 \leq k \leq 3} \quad 1.6 \quad k=2 \text{ or } 3$$

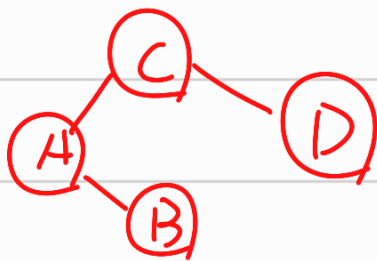
$$A[1,4] = \min_{1 \leq k \leq 4}$$

$$A[1,0] + A[2,4] + 1 = 2$$

$$A[1,1] + A[3,4] + 1 = 1.9$$

$$k=3 \quad A[1,2] + A[4,4] + 1 = 1.8$$

$$A[1,3] + A[5,4] + 1 = 2.6$$



## 연습문제 6.2

1.

$$A[i,j] = \min_{i \leq k \leq j} (A[i,k-1] + A[k,j] + \sum_{q=i}^j P(a_q))$$

$$P_1 = 0.21 \quad P_2 = 0.11 \quad P_3 = 0.16 \quad P_4 = 0.29 \quad P_5 = 0.23$$

$$A[i,j]$$

	1	2	3	4	5
1	0.21	0.43	0.85	1.49	2.08
2		0.11	0.38	0.89	1.4
3			0.16	0.61	1.09
4				0.29	0.75
5					0.23

	1	2	3	4	5
1	1	1	2	3	4
2		2	3	4	4
3			3	4	4
4				4	4
5					5

$$A[1,2]$$

$$k=1 \quad A[1,0] + A[2,2] + P_1 + P_2 = 0.11 + 0.21 + 0.11 = 0.43$$

$$k=2 \quad A[1,1] + A[3,2] + P_1 + P_2 = 0.21 + 0.32 = 0.53$$

$$A[2,3]$$

$$k=2 \quad A[2,1] + A[3,3] + p_2 + p_3 = 0.16 + 0.27$$

$$k=3 \quad A[2,2] + A[4,3] + p_2 + p_3 = 0.11 + 0.27 = 0.38$$

$$A[3,4]$$

$$k=3 \quad A[3,2] + A[4,4] + p_3 + p_4 = 0.24 + 0.45 = 0.69$$

$$k=4 \quad A[3,3] + A[5,4] + p_3 + p_4 = 0.16 + 0.45 = 0.61$$

$$A[4,5]$$

$$k=4 \quad A[4,3] + A[5,5] + p_4 + p_5 = 0.23 + 0.52 = 0.75$$

$$k=5 \quad A[4,4] + A[6,5] + p_4 + p_5 = 0.29 + 0.52$$

$$A[1,5]$$

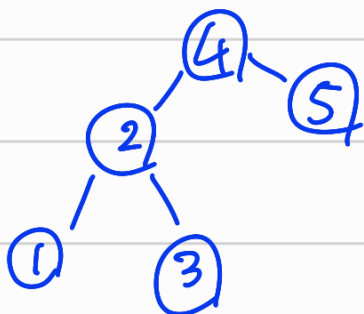
$$k=1 \quad A[1,0] + A[2,5] + 1 = 1.41$$

$$k=2 \quad A[1,1] + A[3,5] + 1 = 0.21 + 1.07 + 1$$

$$k=3 \quad A[1,2] + A[4,5] + 1 = 0.43 + 0.75 + 1$$

$$k=4 \quad A[1,3] + A[5,5] + 1 = 0.85 + 0.23 + 1 = 2.08$$

$$k=5 \quad A[1,4] + A[6,5] + 1 = 1.49 + 1$$



# 스도킹 문제집 거리

$$D[i, j] = \min (D[i, j-1] + d_1, D[i-1, j] + d_2, D[i-1, j-1] + 0/d_3)$$

ex) S = Gumbo

T = GAMBOL

→ 답은 2

if  $d_1 = d_2 = d_3 = 1$

	0	1	2	3	4	5
G 1		0	1	2	3	4
A 2		1	1	2	3	4
M 3		2	2	1	2	3
B 4		3	3	2	1	2
O 5		4	4	3	2	1
L 6		5	5	4	3	3

같은 문자 0  
다르면 1

	0	1	2	3	4	5
a 1		1	2	2	3	4
b 2		1	1	2	2	3
a 3		2	2	1	2	3
a 4		3	3	2	2	3

① :  $\begin{pmatrix} 2+1 \\ 3+1 \\ 4+1 \end{pmatrix} \rightarrow \min$

	0	1	2	3	4	5	6	7	8
a 1		2	1	2	3	4	5	6	7
b 2		1	2	1	2	3	4	5	6
c 3									
a 4									
b 5									
c 6									