

matrix A_0 A_1 A_2 A_3 A_4 A_5
 dimension 30×35 35×15 15×5 5×10 10×20 20×25

d_0 30
 d_1 35
 d_2 15
 d_3 5
 d_4 10
 d_5 20
 d_6 25

N	0	1	2	3	4	5
0	0					
1		0				
2			0			
3				0		
4					0	
5						0

$A_0 A_1 = 30 \cdot 35 \cdot 15 = 15750$
 $A_1 A_2 = 35 \cdot 15 \cdot 5 = 2625$
 $A_2 A_3 = 15 \cdot 5 \cdot 10 = 750$
 $A_3 A_4 = 5 \cdot 10 \cdot 20 = 1000$
 $A_4 A_5 = 10 \cdot 20 \cdot 25 = 5000$

N	0	1	2	3	4	5
0	0	15750				
1		0	2625			
2			0	750		
3				0	1000	
4					0	5000
5						0

K	0	1	2	3	4	5
0		0				
1			1			
2				2		
3					3	
4						4
5						

$A_0 A_1 A_2 = \min \begin{cases} [A_0(A_1 A_2)] & 0 + 2625 + 30 \cdot 35 \cdot 5 = 7875 \\ [(A_0 A_1) A_2] & 15750 + 0 + 30 \cdot 15 \cdot 5 = 18000 \end{cases}$

N	0	1	2	3	4	5
0	0	15750	7875			
1		0	2625			
2			0	750		
3				0	1000	
4					0	5000
5						0

K	0	1	2	3	4	5
0		0	0			
1			1			
2				2		
3					3	
4						4
5						

$A_1 A_2 A_3 = \min \begin{cases} A_1(A_2 A_3) & 0 + 750 + 35 \cdot 15 \cdot 10 = 6000 \\ (A_1 A_2) A_3 & 2625 + 0 + 35 \cdot 5 \cdot 10 = 4375 \end{cases}$

N	0	1	2	3	4	5
0	0	15750	7875			
1		0	2625	4375		
2			0	750		
3				0	1000	
4					0	5000
5						0

K	0	1	2	3	4	5
0		0	0			
1			1	2		
2				2		
3					3	
4						4
5						

$$\begin{array}{l}
 i=2 \\
 j=4
 \end{array}
 A_2 A_3 A_4 \quad \min \left\{ \begin{array}{l} (A_2)(A_3 A_4) \\ (A_2 A_3)(A_4) \end{array} \right. \quad \begin{array}{l} 0 + 1000 + 15 \cdot 5 \cdot 20 = 2500 \\ 750 + 0 + 15 \cdot 10 \cdot 20 = 3750 \end{array}$$

$$\begin{array}{l}
 i=3 \\
 j=5
 \end{array}
 A_3 A_4 A_5 \quad \min \left\{ \begin{array}{l} (A_3)(A_4 A_5) \\ (A_3 A_4)(A_5) \end{array} \right. \quad \begin{array}{l} 0 + 5000 + 5 \cdot 10 \cdot 25 = 6250 \\ 1000 + 0 + 5 \cdot 20 \cdot 25 = 3500 \end{array}$$

N	0	1	2	3	4	5
0	0	15750	7875			
1		0	2625	4375		
2			0	750	2500	
3				0	1000	3500
4					0	5000
5						0

K	0	1	2	3	4	5
0		0	0			
1			1	2		
2				2	2	
3					3	4
4						4
5						

$$\begin{array}{l}
 i=0 \\
 j=3
 \end{array}
 A_0 A_1 A_2 A_3 \quad \min \left\{ \begin{array}{l} (A_0 A_1 A_2 A_3) \\ (A_0 A_1 A_2) A_3 \\ (A_0 A_1 A_3) A_2 \end{array} \right. \quad \begin{array}{l} 0 + 4375 + 30 \cdot 35 \cdot 10 = 14875 \\ 15750 + 750 + 30 \cdot 15 \cdot 10 = 21000 \\ 7875 + 0 + 30 \cdot 5 \cdot 10 = 9375 \end{array}$$

$$\begin{array}{l}
 i=1 \\
 j=4
 \end{array}
 A_1 A_2 A_3 A_4 \quad \min \left\{ \begin{array}{l} (A_1 A_2 A_3 A_4) \\ (A_1 A_2 A_3) A_4 \\ (A_1 A_2 A_4) A_3 \end{array} \right. \quad \begin{array}{l} 0 + 2500 + 35 \cdot 15 \cdot 20 = 13000 \\ 2625 + 1000 + 35 \cdot 5 \cdot 20 = 7125 \\ 4375 + 0 + 35 \cdot 10 \cdot 20 = 11375 \end{array}$$

$$\begin{array}{l}
 i=2 \\
 j=5
 \end{array}
 A_2 A_3 A_4 A_5 \quad \min \left\{ \begin{array}{l} A_2 A_3 A_4 A_5 \\ A_2 A_3 A_4) A_5 \\ A_2 A_3 A_5) A_4 \end{array} \right. \quad \begin{array}{l} 0 + 3500 + 15 \cdot 5 \cdot 25 = 5375 \\ 750 + 5000 + 15 \cdot 10 \cdot 25 = 9500 \\ 2500 + 0 + 15 \cdot 20 \cdot 25 = 10000 \end{array}$$

N	0	1	2	3	4	5
0	0	15750	7875	9375		
1		0	2625	4375	7125	
2			0	750	2500	5375
3				0	1000	3500
4					0	5000
5						0

K	0	1	2	3	4	5
0		0	0	2		
1			1	2	2	
2				2	2	2
3					3	4
4						4
5						

$$\begin{array}{l}
 i=0 \\
 j=4
 \end{array}
 A_0 A_1 A_2 A_3 A_4 \quad \min \left\{ \begin{array}{l} A_0 A_1 A_2 A_3 A_4 \\ A_0 A_1 A_2 A_3) A_4 \\ A_0 A_1 A_2 A_4) A_3 \\ A_0 A_1 A_3 A_4) A_2 \end{array} \right. \quad \begin{array}{l} 0 + 7125 + 30 \cdot 35 \cdot 20 = 28125 \\ 15750 + 2500 + 30 \cdot 15 \cdot 20 = 27250 \\ 7875 + 1000 + 30 \cdot 5 \cdot 20 = 11875 \\ 9375 + 0 + 30 \cdot 10 \cdot 20 = 15375 \end{array}$$

$$\begin{array}{l}
 i=1 \\
 j=5
 \end{array}
 A_1 A_2 A_3 A_4 A_5 \quad \min \left\{ \begin{array}{l} A_1 A_2 A_3 A_4 A_5 \\ A_1 A_2 A_3 A_4) A_5 \\ A_1 A_2 A_3 A_5) A_4 \\ A_1 A_2 A_4 A_5) A_3 \end{array} \right. \quad \begin{array}{l} 0 + 5375 + 35 \cdot 15 \cdot 25 = 18500 \\ 2625 + 3500 + 35 \cdot 5 \cdot 25 = 10500 \\ 4375 + 5000 + 35 \cdot 10 \cdot 25 = 18125 \\ 7125 + 0 + 35 \cdot 20 \cdot 25 = 24625 \end{array}$$

N	0	1	2	3	4	5
0	0	15750	7875	9375	11875	
1		0	2625	4375	7125	10500
2			0	750	2500	5375
3				0	1000	3500
4					0	5000
5						0

K	0	1	2	3	4	5
0		0	0	2	2	
1			1	2	2	2
2				2	2	2
3					3	4
4						4
5						

$$\begin{array}{l}
 i=0 \\
 j=5 \\
 \min
 \end{array}
 \left\{
 \begin{array}{l}
 A_0 | A_1 A_2 A_3 A_4 A_5 \\
 A_0 A_1 | A_2 A_3 A_4 A_5 \\
 A_0 A_1 A_2 | A_3 A_4 A_5 \\
 A_0 A_1 A_2 A_3 | A_4 A_5 \\
 A_0 A_1 A_2 A_3 A_4 | A_5
 \end{array}
 \right.
 \begin{array}{l}
 0 + 10500 \\
 15750 + 5375 \\
 7875 + 3500 \\
 9375 + 5000 \\
 11875 + 0
 \end{array}
 \begin{array}{l}
 + 30 \cdot 35 \cdot 25 = 36750 \\
 + 30 \cdot 15 \cdot 25 = 32375 \\
 + 30 \cdot 5 \cdot 25 = 15125 \\
 + 30 \cdot 10 \cdot 25 = 21875 \\
 + 30 \cdot 20 \cdot 25 = 26875
 \end{array}$$

N	0	1	2	3	4	5
0	0	15750	7875	9375	11875	15125
1		0	2625	4375	7125	10500
2			0	750	2500	5375
3				0	1000	3500
4					0	5000
5						0

K	0	1	2	3	4	5
0		0	0	2	2	2
1			1	2	2	2
2				2	2	2
3					3	4
4						4
5						

$$N_{0,5} \quad (A_0 A_1 A_2)(A_3 A_4 A_5)$$

$$(A_0(A_1 A_2))(A_3 A_4)(A_5)$$

$$N_{0,2} = 0 \quad N_{3,5} = 4$$

