

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

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

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

$$\begin{aligned} A_0A_1 & 30 \cdot 35 \cdot 15 = 15750 \\ A_1A_2 & 35 \cdot 15 \cdot 5 = 2625 \\ A_2A_3 & 15 \cdot 5 \cdot 10 = 750 \\ A_3A_4 & 5 \cdot 10 \cdot 20 = 1000 \\ A_4A_5 & 10 \cdot 20 \cdot 25 = 5000 \end{aligned}$$

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	0				
1		1				
2			2			
3				3		
4					4	
5						

$$A_0A_1A_2 = \min \left\{ \begin{array}{l} [f(A_0)(A_1A_2)] \\ [f(A_0A_1) \cdot A_2] \end{array} \right. \quad \begin{array}{l} 0 + 2625 + 30 \cdot 35 \cdot 15 = 7875 \\ 15750 + 0 + 30 \cdot 15 \cdot 5 = 18000 \end{array}$$

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	0			
1		1				
2			2			
3				3		
4					4	
5						

$$A_1A_2A_3 = \min \left\{ \begin{array}{l} A_1(A_2A_3) \\ (A_1A_2) \cdot A_3 \end{array} \right. \quad \begin{array}{l} 0 + 750 + 35 \cdot 15 \cdot 10 = 6000 \\ 2625 + 0 + 35 \cdot 5 \cdot 10 = 4375 \end{array}$$

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

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

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

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

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

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

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

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

$i=0 \quad j=5 \quad \min \quad \left\{ \begin{array}{l} A_0 | A_1 A_2 A_3 A_4 A_5 \\ A_0 A_1 | A_2 A_3 A_4 A_5 \\ A_0 A_1 A_2 | A_3 A_4 A_5 \\ A_0 A_1 A_2 A_3 | A_4 A_5 \\ A_0 A_1 A_2 A_3 A_4 | A_5 \\ A_0 A_1 A_2 A_3 A_4 A_5 \end{array} \right.$

$0 + 10500$	$+ 30 \cdot 35 \cdot 25 = 36750$
$15750 + 5375$	$+ 30 \cdot 15 \cdot 25 = 32375$
$7875 + 3500$	$+ 30 \cdot 5 \cdot 25 = 15125$
$9375 + 5000$	$+ 30 \cdot 10 \cdot 25 = 21875$
$11875 + 0$	$+ 30 \cdot 20 \cdot 25 = 26875$

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

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

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

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

