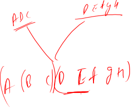

ABC
DEfgh
(A (B C)(D E f g h)

```
int minAns = 1e9;
for (int cut = si+1; cut < ei; cut++){
    int lans = mcm(si, cut);
    int rans = mcm(cut, ei);

    int res = lans + a[si]*a[cut]*a[ei] + rans;
    minAns = min(minAns, res);
}
```

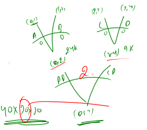
((AB) · (CD))

E f

24K + + 9K

$E_{40\times 30} \times f_{30\times 30}$

$N_{40\times 30} \rightarrow 40\times 30\times 30$


(0,1)
(1,2)
(2,3)
(3,4)
A
B
C
D
0
(0,2) 24K
(2,4) 9K
AB
CD
2
(0,4)

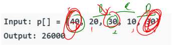
$\begin{bmatrix} a & e \\ b & c \\ c & d \end{bmatrix}_{3\times 2} \begin{bmatrix} p & r & t \\ q & s & u \end{bmatrix}_{2\times 3} = \begin{bmatrix} \_ & \_ & \_ \\ \_ & \_ & \_ \\ \_ & \_ & \_ \end{bmatrix}$

$\begin{bmatrix} ap+eq & ar+es & at+eu \\ bp+cq & br+cs & bt+cu \\ cp+dq & cr+ds & ct+du \end{bmatrix}$

$[\ ]_{pq} [\ ]_{qr} = [\ ]_{p\times r}$

$\boxed{cost = q \cdot p \cdot r}$

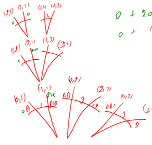
$cost = p \cdot q \cdot r$



```
Input: p[] = {40, 20, 30, 10, 30}
Output: 26000
```

A = 40×20
B = 20×30
C = 30×10
D = 10×30

res = A.B.C.D


(2,3)
(3,4)
(1,2)
(2,3)
(1,3)
(2,4)
(1,4)
(0,1)
(0,2)
(2,4)
(0,3)
(3,4)
A
AB
ABC
CD
D
9K
(0,4)

$0 + 20\times 30\times 30 + 9000$

$0 + 18000 + 9000$

27000

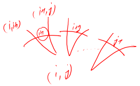
A = 40×20 (0,1)
B = 20×30 (1,2)
C = 30×10 (2,3)
D = 10×30 (3,4)

$0 + 40\times 20\times 30 + 27K$

(A (B (C D)))

$A_{40\times 20}\ f_{20\times 30}$

$g_{40\times 30}$


(i,i+1)
(i+1,j)
(i,i+2)
(i+2,j)
(j-1)
(i,j)

$A = [\ ]_{p\times q}$, $B = [\ ]_{r\times s}$

① $(A\cdot B \neq B\cdot A)$

② $A_{pq} \cdot B_{rs} = C$ ((i) $q = r$ (ii) $res = C_{p\times s}$)

③ $((A_{ab} \cdot B_{bc})\, C_{cd})\,(D_{df} \cdot E_{ef}) = (res)_{a\cdot f}$

$(abc + acd) + adf + (def)$

$[\ ]_{4\times 5} [\ ]_{5\times 10} = [\ ]_{4\times 10}$

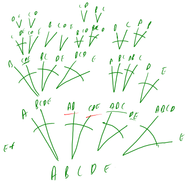
$[\ ]_{a\times c} [\ ]_{c\times f}$

cost = cde + cef + abc + acf

cost = abc + acd + ade + aef

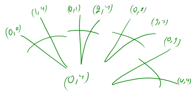
(A B | C D E)

abc + acf + cde + cef


A
BCDE
AB
CDE
ABC
DE
ABCD
E
A B C D E

[ ] = 0

A B C D E
0 1 2 3 4


(0,0)
(1,4)
(0,1)
(2,4)
(0,2)
(3,4)
(0,3)
(4,4)
(0,4)