

### **MATRIC CHAIN MULTIPLICATION :**

```
#include<bits/stdc++.h>
using namespace std;
#define ll long long
ll cost[105][105],a[205];
ll mincost(ll n)
{
    //for(ll i=1;i<=n;i++)
    //cost[i][i]=0;
    for(ll len=2;len<=n;len++)
    {
        for(ll i=1;i<=n-len+1;i++)
        {
            ll j=i+len-1;
            cost[i][j]=1e15;
            for(ll k=i;j<n&&k<=j-1;k++)
            {
                ll c=cost[i][k]+cost[k+1][j]+a[i-1]*a[k]*a[j];
                cost[i][j]=min(cost[i][j],c);
            }
        }
    }
    return cost[1][n-1];
}
int main()
{
    ll n,cnt=0;
    cin >> n;
    for(ll i=0;i<n;i++)
    {
        ll x,y;
        cin >> x>> y;
        if(i==0)
        {
            a[cnt]=x;
            cnt++;
        }
        a[cnt]=y;
        cnt++;
    }
    n=cnt;
    ll ans=mincost(n);
    cout << ans<< endl;
}
```

**Input :**

6
30 35
35 15
15 5
5 10
10 20
20 25

so, the a[]={ 30,35,15,5,10,20,25};

