

Cutting sticks(MCM):

```
#include<bits/stdc++.h>
```

```
using namespace std;
```

```
#define ll long long
```

```
ll dp[52][52];
```

```
ll arr[52];
```

```
ll fun(ll b, ll e)
```

```
{
```

```
// cout<<"begin"<<arr[b]<<" end "<<arr[e]<<endl;
```

```
if(b+1>=e) return 0;
```

```
if(dp[b][e]!=-1) return dp[b][e];
```

```
ll ret1 = 999999999, left = 0, right = 0, current = 0;
```

```
for(ll i = b+1; i<e; i++)
```

```
{
```

```
left = fun(b,i);
```

```
right = fun(i,e);
```

```
current = arr[e] - arr[b];
```

```
ret1 = min(ret1, left + right + current);
```

```
}
```

```
return dp[b][e] = ret1;
```

```
}
```

```
int main()
```

```
{
```

```
ll sz,n;
```

```
while(scanf("%lld",&sz) == 1 && sz!=0)
```

```
{
```

```
scanf("%lld",&n);
```

```
arr[0] = 0;
```

```
for(ll i=1; i<=n; i++)
```

```
scanf("%lld",&arr[i]);
```

```
n++;
```

```
arr[n] = sz;
```

```
memset(dp,-1,sizeof(dp));
```

```
ll ans = fun(0,n);
```

```
printf("The minimum cutting is %lld.\n",ans);
```

```
}
```

```
return 0;
```

```
}
```