



# **WORKSHEET 1**

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#### 1. Fire and Ice

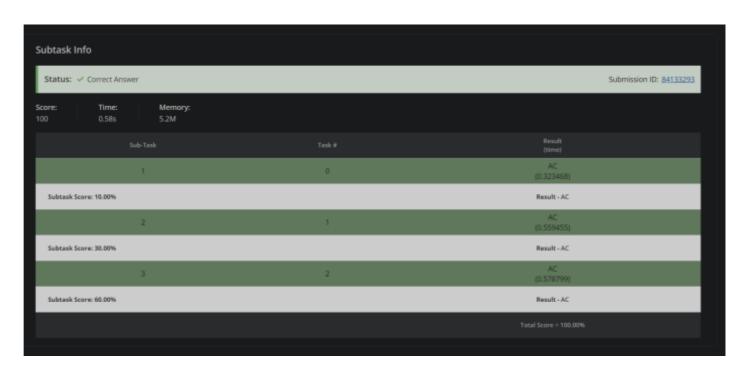
## **Program Code:**







### **Output:**







## 2. Gold Mining

## **Program Code:**

```
C++17
    #include <iostream>
    using namespace std;
4 int main() {
         int t;
 6
         cin>>t;
         while(t--){
8
             int n,x,y;
             cin>>n>>x>>y;
10
             double b = y*(n+1);
11
             if(x <= b ){
    cout<<"yes"<<endl;</pre>
12
13
14
             else
15
                  cout<<"no"<<endl;</pre>
16
17
         return 0;
18
19
20
```

# **Output**

```
Output

no
yes
yes
```







#### 3. The Lead Game

### **Program Code:**

```
int lead=0;
int winner=0;
int player1=0,player2=0;

while(n--){
   int p1,p2;
    cin>>p1>>p2;

   player1+=p1;
   player2+=p2;

   int d = abs(player2-player1);

   if(d>lead){
      lead = d;
      player1>player2?winner=1:winner=2;
   }
}

cout<<winner<<" "<<lead<<endl;</pre>
```

# **Output:**

```
Output
1 58
```







## 4. Sums in a triangle

**Program Code:** 

```
int t;
cin>>t;
while(t--){
  int n;
  cin>>n;

int a[n][n];

for(int i=0;i<n;i++){
    for(int j=0;j<i+1;j++){
       cin>>a[i][j];
  }

for(int i=n-2;i>=0;i--){
    for(int j=0;j<i+1;j++){
       a[i][j]=a[i][j]+max(a[i+1][j],a[i+1][j+1]);
    }
}
cout<<a[0][0]<<endl;</pre>
16:3
```

# **Output:**

```
Output

5
9
```







#### **5.Small Factorials**

## **Program Code:**

```
int main() {
    // your code goes here
    int t;
    cin>>t;
    while(t--)
    {
        int n;
        cin>n;
        cpp_int fact=1;
        for(int i=n;i>0;i--)
            fact=fact*i;
        cout<<fact<<endl;
    }
    return 0;
}</pre>
```

## **Output**

```
Output

1
2
120
6
```

