Original sacred games story

It’s similar to longest increasing subarray. You have to decide if you will choose to take the number or not for all numbers. If you are able to choose a number i.e. ($a_i <= 2*a_{i-1}$) then you will definitely take it in current sequence because number are sorted and distinct. If you are not able to choose the number you will start a new sequence from that index (Since you will not be able to choose any further number also because numbers are sorted and distinct).

Solution

```
#include<bits/stdc++.h>
using namespace std;
int main()
{
    int t;
    cin>>t;

        for(int ss = 0; ss<t; ss++){
        int n,c=0,maxi=0,i;
        cin>>n;
        long long int a[n];int b[n];
        cin>>a[0];b[0]=0;



        for(i=1; i<n; i++)
        {
                cin>>a[i];
                if(a[i]>(2*a[i-1]))
                b[i]=0;
                else
                b[i]=1;
        }

        for(i=0; i<n; i++)
        {
                if(b[i]==0)
                {
                        maxi=max(c,maxi);
                        c=0;
                }
                else
                c++;
        }

        maxi=max(c,maxi);

                cout<<maxi+1<<endl;
        }
    }
```