

# Policemen - Thieves 2

Problem	Submissions	Leaderboard	Discussions
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an array of size N. Which has the following specifications: Each element in the array contains either a policeman or a thief. Each policeman can catch only one thief. A policeman cannot catch a thief who is more than K units away from him. We need to find the maximum number of thieves that can be caught.



### Input Format

6  
P  
T  
P  
T  
T  
P  
3

### Output Format

Maximum thieves caught: 3

### Sample Input 0

```
6
P
T
P
T
T
P
3
```

### Sample Output 0

```
Maximum thieves caught: 3
```

Java 8

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```
import java.io.*;
import java.util.*;

public class Solution {

    public static void main(String[] args) {
        /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named Solution. */
        Scanner z=new Scanner(System.in);
        int n=z.nextInt();
        char arr[]=new char[n];
        for(int i=0;i<n;i++){
            arr[i]=z.next().charAt(0);
        }
        int k=z.nextInt();
        int pc=0,tc=0;
        for(int i=0;i<n;i++){
            if (arr[i]=='P'){
                pc++;
            }
            else{
                tc++;
            }
        }
        int police[]= new int[pc];
        int thief[]=new int[tc];
        int m=0;int q=0;
        for(int i=0;i<n;i++){
            if(arr[i]=='P'){
                police[m++]=i;
            }
            else{
                thief[q++]=i;
            }
        }
        int count=0;
        int i=0;
        int j=0;
        while(i<police.length && j<thief.length){
            if(Math.abs(police[i]-thief[j])<=k){
                count++;
                i++;
                j++;
            }
            else if(police[i]<thief[j]){
                i++;
            }
            else{
                j++;
            }
        }

        System.out.print("Maximum thieves caught: "+count);

    }
}
```

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