

Maximum Profit - Hackerearth

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The Code:

```
#include <stdio.h>

long long int max(long long int a, long long int b){
    return a > b ? a : b;
}

int main(){
    int length;
    long long int penalty;
    scanf("%d %lld", &length, &penalty);

    int iter;
    long long int belt1Profit, belt2Profit, tempProfit;
    long long int* belt1 = (long long int*)calloc(length, sizeof(long long int));
    long long int* belt2 = (long long int*)calloc(length, sizeof(long long int));

    for(iter=0; iter<length; iter++){
        scanf("%lld", &belt1[iter]);
    }

    for(iter=0; iter<length; iter++){
        scanf("%lld", &belt2[iter]);
    }

    belt1Profit = belt1[length-1];
    belt2Profit = belt2[length-1];
    for(iter=length-2; iter>=0; iter--){
        tempProfit = belt1[iter] + max(belt1Profit, (belt2Profit - penalty));
        belt2Profit = belt2[iter] + max(belt2Profit, (belt1Profit - penalty));
        belt1Profit = tempProfit;
    }

    printf("%lld", max(belt1Profit, belt2Profit));
}
```

The stats:

Score
20.0

Time (sec)
0.86006

Memory (KiB)

64

Language

C