

**S2**

Started on Wednesday, 8 October 2025, 3:35 PM

State Finished

Completed on Wednesday, 8 October 2025, 3:38 PM

Time taken 2 mins 55 secs

Marks 1.00/1.00

Grade **10.00** out of 10.00 (**100%**)

Question 1 | Correct Mark 1.00 out of 1.00

Write a program to take value V and we want to make change for V Rs, and we have infinite supply of each of the denominations in Indian currency, i.e., we have infinite supply of { 1, 2, 5, 10, 20, 50, 100, 500, 1000} valued coins/notes, what is the minimum number of coins and/or notes needed to make the change.

Input Format:

Take an integer from stdin.

Output Format:

print the integer which is change of the number.

Example Input :

64

Output:

4

Explanation:

We need a 50 Rs note and a 10 Rs note and two 2 rupee coins.

Answer: (penalty regime: 0 %)

```

1 #include <stdio.h>
2
3 int main() {
4     int V;
5     scanf("%d", &V);
6
7     int denominations[] = {1000, 500, 100, 50, 20, 10, 5, 2, 1};
8     int n = sizeof(denominations) / sizeof(denominations[0]);
9     int count = 0;
10
11    for (int i = 0; i < n; i++) {
12        if (V >= denominations[i]) {
13            count += V / denominations[i];
14            V = V % denominations[i];
15        }
16    }
17
18    printf("%d\n", count);
19    return 0;
20}
21

```

	Input	Expected	Got	
✓	49	5	5	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

[Back to Course](#)

SABARISH M K 2024-CSE ▾**S2****Started on** Wednesday, 8 October 2025, 3:39 PM**State** Finished**Completed on** Wednesday, 8 October 2025, 3:39 PM**Time taken** 42 secs**Marks** 1.00/1.00**Grade** **10.00** out of 10.00 (**100%**)

Question 1 | Correct Mark 1.00 out of 1.00

Assume you are an awesome parent and want to give your children some cookies. But, you should give each child at most one cookie.

Each child i has a greed factor $g[i]$, which is the minimum size of a cookie that the child will be content with; and each cookie j has a size $s[j]$. If $s[j] \geq g[i]$, we can assign the cookie j to the child i , and the child i will be content. Your goal is to maximize the number of your content children and output the maximum number.

Example 1:**Input:**

3

1 2 3

2

1 1

Output:

1

Explanation: You have 3 children and 2 cookies. The greed factors of 3 children are 1, 2, 3.

And even though you have 2 cookies, since their size is both 1, you could only make the child whose greed factor is 1 content.

You need to output 1.

Constraints:

$1 \leq g.length \leq 3 * 10^4$

$0 \leq s.length \leq 3 * 10^4$

$1 \leq g[i], s[j] \leq 2^{31} - 1$

Answer: (penalty regime: 0 %)

```

1 #include <stdio.h>
2 #include <stdlib.h>
3
4 // compare function for qsort
5 int cmp(const void *a, const void *b) {
6     return (*(int *)a - *(int *)b);
7 }
8
9 int main() {
10    int n, m;
11    scanf("%d", &n); // number of children
12    int g[n];
13    for (int i = 0; i < n; i++) scanf("%d", &g[i]);
14
15    scanf("%d", &m); // number of cookies
16    int s[m];
17    for (int i = 0; i < m; i++) scanf("%d", &s[i]);
18
19    // sort both arrays
20    qsort(g, n, sizeof(int), cmp);
21    qsort(s, m, sizeof(int), cmp);
22
23    int i = 0, j = 0, content = 0;
24
25 while (i < n && j < m) {
26     if (s[j] >= g[i]) { // cookie can satisfy the child
27         content++;
28         i++;
29         j++;
30     } else {
31         ...
32     }
33 }
```

```
31         j++; // try next cookie
32     }
33 }
34
35 printf("%d\n", content);
36 return 0;
37 }
38 }
```

	Input	Expected	Got	
✓	2	2	2	✓
	1 2			
	3			
	1 2 3			

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

[Back to Course](#)

SABARISH M K 2024-CSE ▾**S2****Started on** Wednesday, 8 October 2025, 3:40 PM**State** Finished**Completed on** Wednesday, 29 October 2025, 3:51 PM**Time taken** 21 days**Marks** 0.00/1.00**Grade** **0.00** out of 10.00 (0%)

Question 1 | Not answered Mark 0.00 out of 1.00

A person needs to eat burgers. Each burger contains a count of calorie. After eating the burger, the person needs to run a distance to burn out his calories.

If he has eaten i burgers with c calories each, then he has to run at least $3^i * c$ kilometers to burn out the calories. For example, if he ate 3

burgers with the count of calorie in the order: [1, 3, 2], the kilometers he needs to run are $(3^0 * 1) + (3^1 * 3) + (3^2 * 2) = 1 + 9 + 18 = 28$.

But this is not the minimum, so need to try out other orders of consumption and choose the minimum value. Determine the minimum distance

he needs to run. Note: He can eat burger in any order and use an efficient sorting algorithm. Apply greedy approach to solve the problem.

Input Format

First Line contains the number of burgers

Second line contains calories of each burger which is n space-separate integers

Output Format

Print: Minimum number of kilometers needed to run to burn out the calories

Sample Input

3

5 10 7

Sample Output

76

For example:

Test	Input	Result
Test Case 1	3 1 3 2	18

Answer: (penalty regime: 0 %)

1	
---	--

Syntax Error(s)

//

```
_tester_.c:1:1: error: stray '\' in program
1 | \#include <stdio.h>
| ^
__tester__.c:1:2: error: stray '#' in program
1 | \#include <stdio.h>
| ^
__tester__.c:1:11: error: expected '=', ',', ';', 'asm' or '__attribute__' before '<' token
1 | \#include <stdio.h>
|       ^
In file included from __tester__.c:2:
/usr/include/stdlib.h:98:8: error: unknown type name 'size_t'
98 | extern size_t __ctype_get_mb_cur_max (void) __THROW __wur;
|       ~~~~~
/usr/include/stdlib.h:540:22: error: unknown type name 'size_t'
540 | extern void *malloc (size_t __size) __THROW __attribute_malloc__
|       ~~~~~
/usr/include/stdlib.h:57:1: note: 'size_t' is defined in header '<stddef.h>; did you forget to '#include <stddef.h>?
56 | #include <bits/floatn.h>
+++ |+#include <stddef.h>
57 |
/usr/include/stdlib.h:543:22: error: unknown type name 'size_t'
543 | extern void *calloc (size_t __nmemb, size_t __size)
|       ~~~~~
/usr/include/stdlib.h:543:22: note: 'size_t' is defined in header '<stddef.h>; did you forget to '#include <stddef.h>?
/usr/include/stdlib.h:543:38: error: unknown type name 'size_t'
543 | extern void *calloc (size_t __nmemb, size_t __size)
|       ~~~~~
/usr/include/stdlib.h:543:38: note: 'size_t' is defined in header '<stddef.h>; did you forget to '#include <stddef.h>?
/usr/include/stdlib.h:551:36: error: unknown type name 'size_t'
551 | extern void *realloc (void *__ptr, size_t __size)
|       ~~~~~
/usr/include/stdlib.h:551:36: note: 'size_t' is defined in header '<stddef.h>; did you forget to '#include <stddef.h>?
/usr/include/stdlib.h:829:23: error: unknown type name 'size_t'
829 |           size_t __nmemb, size_t __size, __compar_fn_t __compar)
|       ~~~~~
/usr/include/stdlib.h:829:23: note: 'size_t' is defined in header '<stddef.h>; did you forget to '#include <stddef.h>?
/usr/include/stdlib.h:829:39: error: unknown type name 'size_t'
829 |           size_t __nmemb, size_t __size, __compar_fn_t __compar)
|       ~~~~~
/usr/include/stdlib.h:829:39: note: 'size_t' is defined in header '<stddef.h>; did you forget to '#include <stddef.h>?
/usr/include/stdlib.h:838:34: error: unknown type name 'size_t'
838 | extern void qsort (void *__base, size_t __nmemb, size_t __size,
|       ~~~~~
/usr/include/stdlib.h:838:34: note: 'size_t' is defined in header '<stddef.h>; did you forget to '#include <stddef.h>?
/usr/include/stdlib.h:838:50: error: unknown type name 'size_t'
838 | extern void qsort (void *__base, size_t __nmemb, size_t __size,
|       ~~~~~
/usr/include/stdlib.h:838:50: note: 'size_t' is defined in header '<stddef.h>; did you forget to '#include <stddef.h>?
/usr/include/stdlib.h:930:36: error: unknown type name 'size_t'
930 | extern int mblen (const char *__s, size_t __n) __THROW;
|       ~~~~~
/usr/include/stdlib.h:930:36: note: 'size_t' is defined in header '<stddef.h>; did you forget to '#include <stddef.h>?
```

```
/usr/include/stdlib.h:934:48: error: unknown type name ‘size_t’
934 |             const char *__restrict __s, size_t __n) __THROW;
|             ^
|             ~~~~~
/usr/include/stdlib.h:934:48: note: ‘size_t’ is defined in header ‘<stddef.h>’; did you forget to ‘#include <stddef.h>’?
/usr/include/stdlib.h:941:8: error: unknown type name ‘size_t’
941 | extern size_t mbstowcs (wchar_t *__restrict __pwcs,
|             ^
|             ~~~~~
/usr/include/stdlib.h:942:53: error: unknown type name ‘size_t’
942 |             const char *__restrict __s, size_t __n) __THROW
|             ^
|             ~~~~~
/usr/include/stdlib.h:942:53: note: ‘size_t’ is defined in header ‘<stddef.h>’; did you forget to ‘#include <stddef.h>’?
/usr/include/stdlib.h:945:8: error: unknown type name ‘size_t’
945 | extern size_t wcstombs (char *__restrict __s,
|             ^
|             ~~~~~
/usr/include/stdlib.h:946:59: error: unknown type name ‘size_t’
946 |             const wchar_t *__restrict __pwcs, size_t __n)
|             ^
|             ~~~~~
/usr/include/stdlib.h:946:59: note: ‘size_t’ is defined in header ‘<stddef.h>’; did you forget to ‘#include <stddef.h>’?
__tester__.c: In function ‘calculate_min_distance’:
__tester__.c:14:5: error: implicit declaration of function ‘qsort’ [-Werror=implicit-function-declaration]
14 |     qsort(calories, n, sizeof(int), compareDescending);
|     ^
|     ~~~~
__tester__.c: In function ‘main’:
__tester__.c:38:9: error: implicit declaration of function ‘scanf’ [-Werror=implicit-function-declaration]
38 |     if (scanf("%d", &n) != 1 || n <= 0) {
|     ^
|     ~~~~
__tester__.c:3:1: note: include ‘<stdio.h>’ or provide a declaration of ‘scanf’
2 | #include <stdlib.h>
+++ |+#include <stdio.h>
3 |
__tester__.c:38:9: error: incompatible implicit declaration of built-in function ‘scanf’ [-Werror=builtin-declaration-mismatch]
38 |     if (scanf("%d", &n) != 1 || n <= 0) {
|     ^
|     ~~~~
__tester__.c:38:9: note: include ‘<stdio.h>’ or provide a declaration of ‘scanf’
__tester__.c:43:28: error: implicit declaration of function ‘malloc’ [-Werror=implicit-function-declaration]
43 |     int *calories = (int *)malloc(n * sizeof(int));
|             ^
|             ~~~~~
__tester__.c:3:1: note: include ‘<stdlib.h>’ or provide a declaration of ‘malloc’
2 | #include <stdlib.h>
+++ |+#include <stdlib.h>
3 |
__tester__.c:43:28: error: incompatible implicit declaration of built-in function ‘malloc’ [-Werror=builtin-declaration-mismatch]
43 |     int *calories = (int *)malloc(n * sizeof(int));
|             ^
|             ~~~~~
__tester__.c:43:28: note: include ‘<stdlib.h>’ or provide a declaration of ‘malloc’
__tester__.c:51:13: error: incompatible implicit declaration of built-in function ‘scanf’ [-Werror=builtin-declaration-mismatch]
51 |     if (scanf("%d", &calories[i]) != 1) {
|     ^
|     ~~~~
__tester__.c:51:13: note: include ‘<stdio.h>’ or provide a declaration of ‘scanf’
```

```
_tester_.c:63:5: error: implicit declaration of function 'printf' [-Werror=implicit-function-declaration]
 63 |     printf("%lld\n", result);
    |     ^~~~~~
_tester_.c:63:5: note: include '<stdio.h>' or provide a declaration of 'printf'
_tester_.c:63:5: error: incompatible implicit declaration of built-in function 'printf' [-Werror=builtin-declaration-
mismatch]
_tester_.c:63:5: note: include '<stdio.h>' or provide a declaration of 'printf'
cc1: all warnings being treated as errors
```

Incorrect

Marks for this submission: 0.00/1.00.

[Back to Course](#)

SABARISH M K 2024-CSE ▾**S2****Started on** Wednesday, 8 October 2025, 3:42 PM**State** Finished**Completed on** Wednesday, 8 October 2025, 3:43 PM**Time taken** 36 secs**Marks** 1.00/1.00**Grade** **10.00** out of 10.00 (**100%**)

Question 1 | Correct Mark 1.00 out of 1.00

Given an array of N integer, we have to maximize the sum of $\text{arr}[i] * i$, where i is the index of the element ($i = 0, 1, 2, \dots, N$). Write an algorithm based on Greedy technique with a Complexity $O(n\log n)$.

Input Format:

First line specifies the number of elements-n

The next n lines contain the array elements.

Output Format:

Maximum Array Sum to be printed.

Sample Input:

5

2 5 3 4 0

Sample output:

40

Answer: (penalty regime: 0 %)

```

1 #include <stdio.h>
2 #include <stdlib.h>
3
4 // Compare function for ascending sort
5 int cmp(const void *a, const void *b) {
6     return (*(int *)a - *(int *)b);
7 }
8
9 int main() {
10     int n;
11     scanf("%d", &n);
12
13     int arr[n];
14     for (int i = 0; i < n; i++)
15         scanf("%d", &arr[i]);
16
17     // Sort array in ascending order
18     qsort(arr, n, sizeof(int), cmp);
19
20     long long sum = 0;
21     for (int i = 0; i < n; i++) {
22         sum += (long long)arr[i] * i;
23     }
24
25     printf("%lld\n", sum);
26     return 0;
27 }
```

	Input	Expected	Got	
✓	5	40	40	✓
	2			
	5			
	3			
	4			
	0			

	Input	Expected	Got	
✓	10 2 2 2 4 4 3 3 5 5 5	191	191	✓
✓	2 45 3	45	45	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

[Back to Course](#)

SABARISH M K 2024-CSE ▾**S2****Started on** Wednesday, 8 October 2025, 3:43 PM**State** Finished**Completed on** Wednesday, 8 October 2025, 3:44 PM**Time taken** 35 secs**Marks** 1.00/1.00**Grade** **10.00** out of 10.00 (**100%**)

Question 1 | Correct Mark 1.00 out of 1.00

Given two arrays array_One[] and array_Two[] of same size N. We need to first rearrange the arrays such that the sum of the product of pairs(1 element from each) is minimum. That is $\text{SUM } (A[i] * B[i])$ for all i is minimum.

For example:

Input	Result
3	28
1	
2	
3	
4	
5	
6	

Answer: (penalty regime: 0 %)

```

1 #include <stdio.h>
2 #include <stdlib.h>
3
4 // ascending order
5 int asc(const void *a, const void *b) {
6     return (*(int *)a - *(int *)b);
7 }
8
9 // descending order
10 int desc(const void *a, const void *b) {
11     return (*(int *)b - *(int *)a);
12 }
13
14 int main() {
15     int n;
16     scanf("%d", &n);
17
18     int A[n], B[n];
19     for (int i = 0; i < n; i++) scanf("%d", &A[i]);
20     for (int i = 0; i < n; i++) scanf("%d", &B[i]);
21
22     qsort(A, n, sizeof(int), asc);
23     qsort(B, n, sizeof(int), desc);
24
25     long long sum = 0;
26     for (int i = 0; i < n; i++) {
27         sum += (long long)A[i] * B[i];
28     }
29
30     printf("%lld\n", sum);
31     return 0;
32 }
33

```

	Input	Expected	Got	
✓	3 1 2 3 4 5 6	28	28	✓
✓	4 7 5 1 2 1 3 4 1	22	22	✓
✓	5 20 10 30 10 40 8 9 4 3 10	590	590	✓

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

[Back to Course](#)