

Day 55 coding Statement : Given 2 integer arrays X and Y of same size. Consider both arrays as vectors and print the sum of maximum scalar product (Dot product) of 2 vectors.

Sample input 1:

4

1 2 3 4

5 6 7 8

Sample output 1:

70

Explanation :

$$(8*4 + 7*3 + 6*2 + 1*5) = 70$$

Sample input 2:

4

-1 -2 -3 -4

5 6 -7 -8

Sample output 2:

37

Explanation :

$$(-4*-8 + -3*-7 + -2*5 + -1*6) = 37$$

```
import java.util.Arrays;
import java.util.Scanner;

public class Program {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int n = sc.nextInt();
        int arr1[] = new int[n];
        for (int i = 0; i < n; i++) {
```

```
        arr1[i] = sc.nextInt();
    }
    int arr2[] = new int[n];
    for (int i = 0; i < n; i++) {
        arr2[i] = sc.nextInt();
    }
    Arrays.sort(arr1);
    Arrays.sort(arr2);
    int product = 0;
    for (int i = 0; i < n; i++)
        product += arr1[i] * arr2[i];
    System.out.print(product);
}
}
```