5 Classy Cake Pops

Congrats! You have just opened a cake pop business! Your business specializes in making cake pops of many different sizes and flavors. The cake pops are sized based on the length of the radius of the cake pop in centimeters.

Each radius of cake pop has its own assigned flavor and price. In order to make profit faster, you come up with a bit of a sneaky business model. A customer will order cake pops by specifying a “magic number”, which is the total size of cake pop they wish to purchase. The total size refers to all of the radii of the cake pops in their order added up.

Your job is to select cake pops that will give the maximum amount of profit possible for each customer order.

5.1 Input

The input will contain 4 lines in total with only positive integer values.

The first line will be the “magic number” for the customer order.

The second line will give the total number of different cake types.

The third line will list the various radii sizes of the available cake pops and will be space separated.

The fourth line will list the prices of each of the radii, respectively, and will also be space separated.

5.2 Output

The maximum amount of profit that can be made from the order as an integer value.

5.3 Sample Input/Output

<table>
<thead>
<tr>
<th>Sample Input 1</th>
<th>Sample Output 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td>6</td>
<td></td>
</tr>
<tr>
<td>1 3 4 6 7 8</td>
<td></td>
</tr>
<tr>
<td>1 4 5 9 10 11</td>
<td></td>
</tr>
</tbody>
</table>

5.3.1 Sample Explanation

In the above example, the maximum amount of profit that is possible is 14 because the “magic number” chosen by the customer was 10, meaning the cake pop radii of their order must add up to 10. Therefore, cake pops of radii 3 and 7 were chosen, which respectively have a cost of 4 and 10 to get 14.