Rod Cutting

Given a rod of length **N** inches and an array of prices, **price[]**. **price$_i$** denotes the value of a piece of length **i**. Determine the maximum value obtainable by cutting up the rod and selling the pieces.

Example 1:

```
Input:
N = 8
Price[] = {1, 5, 8, 9, 10, 17, 17, 20}
Output:
22
Explanation:
The maximum obtainable value is 22 by
cutting in two pieces of lengths 2 and
6, i.e., 5+17=22.
```

Example 2:

```
Input:
N=8
Price[] = {3, 5, 8, 9, 10, 17, 17, 20}
Output: 24
Explanation:
The maximum obtainable value is
24 by cutting the rod into 8 pieces
of length 1, i.e, 8*3=24.
```

Your Task:

You don't need to read input or print anything. Your task is to complete the function **cutRod()** which takes the array **A[]** and its size **N** as inputs and returns the maximum price obtainable.

Expected Time Complexity: $O(N^2)$
Expected Auxiliary Space: $O(N)$

Constraints:
$1 \leq N \leq 1000$
$1 \leq A_i \leq 10^5$