1) Distribute Candy

```
def distribute_candies(A):
    n = len(A)


    candies = [1] * n

    for i in range(1, n):
        if A[i] > A[i - 1]:
            candies[i] = candies[i - 1] + 1

    for i in range(n - 2, -1, -1):
        if A[i] > A[i + 1]:
            candies[i] = max(candies[i], candies[i + 1] + 1)

    return sum(candies)


A = [1, 2]
result = distribute_candies(A)
print(result)
```

```
3
```

2) Best Time to Buy and Sell Stocks I

```
def max_profit(A):
    n = len(A)

    if n <= 1:
        return 0
    min_price = A[0]
    max_profit = 0

    for price in A:
        min_price = min(min_price, price)
        max_profit = max(max_profit, price - min_price)

    return max_profit

A1 = [1, 2]
A2 = [1, 4, 5, 2, 4]

result1 = max_profit(A1)
result2 = max_profit(A2)

print(result1)
print(result2)
```

```
1
4
```

3)Stairs

```
def climbStairs(A):
    if A == 1:
        return 1
    if A == 2:
        return 2

    ways = [0] * (A + 1)

    ways[1] = 1
    ways[2] = 2

    for i in range(3, A + 1):
        ways[i] = ways[i - 1] + ways[i - 2]

    return ways[A]


A1 = 2
A2 = 3

result1 = climbStairs(A1)
result2 = climbStairs(A2)

print(result1)
print(result2)
```

```
2
3
```

4)Kth Row of Pascal's Triangle

```
def getRow(k):
    if k < 0:
        return []

    row = [1]

    for i in range(1, k + 1):

        current_element = (row[i - 1] * (k - i + 1)) // i
        row.append(current_element)

    return row

k = 3
result = getRow(k)
print(result)
```

```
[1, 3, 3, 1]
```

5) Repeat and Missing Number Array

```
def repeatedNumber(A):
    n = len(A)

    repeated, missing = 0, 0

    for i in range(n):
        index = abs(A[i]) - 1

        if A[index] > 0:
            A[index] = -A[index]
        else:
            repeated = abs(A[i])

    for i in range(n):
        if A[i] > 0:
            missing = i + 1
            break

    return [repeated, missing]

input_array = [3, 1, 2, 5, 3]
output = repeatedNumber(input_array)
print(output)
```

```
[3, 4]
```