Challenging Task 01

(Note: Please don't open it from \\printsrv, first copy into your system as I am adding more problems)

Task 01: Initialize an array of any size say 10. Initialize it randomly. Print array in single line. Next, print the pattern. Pattern has individual elements with tab separator in first line, next sum of consecutive two elements, next sum of consecutive three elements and so on last line has sum of all elements. Here is an example for better understanding:

8 2 4 3 5 2 5 1 2 7

```
8       2       4       3       5       2       5       1       2       7
10      6       7       8       7       7       6       3       9
14      9       12      10      12      8       8       10
17      14      14      15      13      10      15
22      16      19      16      15      17
24      21      20      18      22
29      22      22      25
30      24      29
32      31
39
```

Task 02: Initialize an array of any size say 10. Initialize it randomly. Print array in single line. Next, print the pattern. Pattern starts from ith location of array in each line. Print single element, then sum of two consecutive elements, then sum of three consecutive elements & lastly sum of all elements from ith to last. In next line same pattern but starts from next element. See example for further understand:

9 1 7 3 2

```
9       10      17      20      22
1       8       11      13
7       10      12
3       5
2
```

Task 03: Take a 2D array of size 5x5. Initialize randomly with values 0 & 1 only. Find & print starting location of blocks of size 2x2 having same values either 0 & 1. See example for understanding:

```
0 1 0 0 1
0 0 0 0 0
0 0 1 0 0
0 0 0 1 1
1 0 0 1 1
0,2 has all Zeros
1,0 has all Zeros
1,3 has all Zeros
2,0 has all Zeros
3,1 has all Zeros
3,3 has all Ones
```

Task 04: Take a 2D array of size 10x10. Initialize randomly with values 0 & 1 only. Find & print starting location of pair of blocks of size 3x3 having same elements at corresponding positions. See example for understanding:

0 1 0 1 0 1 0 1 1 1
1 0 1 0 1 1 **0 1 0** 1
0 0 0 1 1 0 **1 0 1** 1
1 1 1 1 0 0 **0 0 0** 1
0 0 0 1 0 0 0 1 0 1
1 0 1 1 0 0 0 1 1 0
1 0 1 0 0 0 1 1 1 1
0 1 1 0 1 0 1 0 1 0
0 0 0 1 0 1 0 0 0 0
0 1 0 0 0 1 0 1 1 1

Block 0,0 and 1,6 have same elements at corresponding positions