

difference

$a_2 \quad j$

	-1	-1		
	8 ₀	4 ₁	2 ₂	3 ₃

$a_1 \quad i$

3 ₀	8 ₁	9 ₂
----------------	----------------	----------------

$i = -1$

$j = -2$

$k = -1$

Sub =

d =

borrow = 0

res

8 ₀	0 ₁	3 ₂	4 ₃
----------------	----------------	----------------	----------------

k

$$(a_2[j] + \text{borrow}) - a_1[j]$$

1 ₀	2 ₁	3 ₂	4 ₃	5 ₄
----------------	----------------	----------------	----------------	----------------

0 to k-1

0

n-1

k=3

k to n-1

5	4	3	2	1
0	1	2	3	4

3	4	5	1	2
0	1	2	3	4

(i) reverse complete arr

(ii) reverse part 1

(iii) reverse part 2

subarrays

continuous
orden

[1, 2, 3, 4]

subarray :

1
1 2
1 2 3
1 2 3 4

2
2 3
2 3 4
n-1

3 4
3 4 n-3
n-2

n

$$n + (n-1) + (n-2) + (n-3)$$

$$4 + 3 + 2 + 1 = \frac{n(n+1)}{2}$$

[1, 2, 3, 4]
0 1 2 3

st → 0, 2, 2, 3
et
[print

for → st = 0	st = 1	st = 2	st = 3
for et 0 → 1 1 → 1 2 2 → 1 2 3 3 → 1 2 3 4	et 1 → 2 2 → 2 3 3 → 2 3 4	et 2 → 3 3 → 3 4	et 3 → 4

for (int st = 0; st < n; st++) {

for (int et = st; et < n; et++) {

// print subarray from st to et

for (int k = st; k <= et; k++) {

syso(arr[k] + " ");

}

sysodn();

}

}

```

//to select start point
for(int st = 0; st < arr.length; st++) {
    //select end point
    for(int et = st; et < arr.length; et++) {
        //print subarray from st to et
        for(int k = st; k <= et; k++) {
            System.out.print(arr[k] + "\t");
        }
        System.out.println();
    }
}

```

arr = [10, 20, 30, 40]
 0 1 2 3

st = 1

k = 1, 2, 3

et = 3

10				20			
10	20			20	30		
10	20	30		20	30	40	
10	20	30	40				

subsets

order ✓

[1, 2, 3]

1 2 3
 1 2 3
 1 2 3 1 3

[1, 2, 3]

subsets \rightarrow Math.pow(2, n)

0 0 0 0 \rightarrow - - -
 1 0 0 1 \rightarrow - - 3
 2 0 1 0 \rightarrow - 2 -
 3 0 1 1 \rightarrow - 2 3
 4 1 0 0 \rightarrow 1 - -
 5 1 0 1 \rightarrow 1 - 3
 6 1 1 0 \rightarrow 1 2 -
 7 1 1 1 \rightarrow 1 2 3

0 \rightarrow ele absent

1 \rightarrow ele present

[1, 2, 3, 4]

0 \rightarrow 0 0 0 0
 1
 2
 3
 4
 5
 6 \rightarrow
 7
 8
 9
 10
 11
 12
 13
 14
 15 \rightarrow 1 1 1 1

- 2 3 -

0	1	1	0
0	1	2	3

2	6	
2	3	0
2	1	1
	0	1

[1, 2, 3]

subarray	subset
1 2 3	- - -
1 2 3	- - 3
1 2 3	- 2 -
1 2 3	- 2 3
1 2 3	1 - -
1 2 3	1 - 3
1 2 3	1 2 -
1 2 3	1 2 3

7

count = 2^n

order

$$\text{count} = \frac{n(n+1)}{2}$$

order, continuous