

0	1	2	3	4	5	6	7	8
-8	1	2	5	8	9	11	23	105

(0,8)
 (1,8)
 (2,8)
 (3,8)
 (4,8)
 (5,8)
 (6,8)
 (7,8)
 (8,8)

5	9	11	2	-8	1	150	23	8
---	---	----	---	----	---	-----	----	---

```

public static void swap(int[] arr, int i, int j) {
    int temp = arr[i];
    arr[i] = arr[j];
    arr[j] = temp;
}

public static void bubbleSort(int[] arr) {
    int n = arr.length;
    for (int i = 0; i < n; i++) {
        for (int j = 1; j < n - i; j++) {
            if (arr[j - 1] > arr[j]) {
                swap(arr, j - 1, j);
            }
        }
    }
}

```

$i=0, [1, 9)$
 $i=1, [1, 8)$
 $i=2, [1, 7)$
 $i=3, [1, 6)$
 $i=4, [1, 5)$
 $i=5, [1, 4)$
 $i=6, [1, 3)$
 $i=7, [1, 2)$
 $i=8, [1, 1)$
 j

3	1	-8	0	7	12	-7	0	11	5	9	6	6	3	-10
---	---	----	---	---	----	----	---	----	---	---	---	---	---	-----