



```
#include <stdio.h>

typedef enum { Left, Right, Eq } Relation;
typedef Relation (*cmp_func)(int, int);

int sort(int *arr, int n, cmp_func cmp)
{
    int i, j, t;
    if(arr==NULL || cmp==NULL) return 0;

    for(i=0; i<n; i++) {
        for(j=i+1; j<n; j++) {
            if(cmp(arr[i], arr[j])==Left) {
                t = arr[i];
                arr[i] = arr[j];
                arr[j] = t;
            }
        }
    }
    return 1;
}

Relation bigger(int a, int b)
{
    if(a>b) return Left;
    if(a==b) return Eq;
    return Right;
}

Relation abs_bigger(int a, int b)
{
    if(a<0) a=-a;
    if(b<0) b=-b;

    if(a>b) return Left;
    if(a==b) return Eq;
    return Right;
}

int main()
{
    int arr[] = { 1, -3, 9, -10, -5 };

    sort(arr, 5, bigger);      /* -10 -5 -3 1 9 */
    sort(arr, 5, abs_bigger); /* 1 -3 -5 9 -10 */

    return 0;
}
```