```c
/*
 *
 */

long n_comp=0;

void sort(Item a[], int l, int r)
{
  int i = l-1, j = r; Item v = a[r];
  if (r>=l) {
    do {
      while (less(a[++i], v)) ;
      while (less(v, a[--j])) ;
      exch(a[i], a[j]);
    } while (i<j);
    exch(a[i], a[j]);
    exch(a[i], a[r]);
    sort(a, l, i-1);
    sort(a, i+1, r);
  }
}
```