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merge(a[],l,m,r)
    i ← l;
    j ← m+1;
    k ← l;
    while (i ≤ m and j ≤ r) do {
        if (a[i] < a[j]) then {
            b[k] ← a[i];
            k ← k+1;
            i ← i+1;
        }
        else {
            b[k] ← a[j];
            k ← k+1; j ← j+1;
        }
    }
    if (i > m) then
        for (p ← j; p ≤ r; p ← p+1) do {
            b[k] ← a[p];
            k ← k+1;
        }
    else
        for (p ← i; p ≤ m; p ← p+1) do
            a[p] ← b[p];
end merge()

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heapify(a[],h,m)
    v ← a[h];
    for (j ← 2*h; j ≤ m; j ← 2*j) do{
        if (j < m and a[j] < a[j+1]) then j ← j+1;
        if (v ≥ a[j]) then exit;
        else a[j/2] ← a[j];
    }
    a[j/2] ← v;
end heapify()

```