Heap Sort

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proc heapsort(A: list,  n: list size)
    {Create heap}
    for r = ⌊n/2⌋ downto 1 do
        sift(r,n)
    end for
    {Finish Sort}
    for m = n downto 2 do
        A[1] ↔ A[m]
        sift(1,m-1)
    end for
end proc

proc sift(p: root,  m: size of list)
    c ← 2*p
    while c ≤ m do
        if c < m then
            if A[c+1] > A[c] then c ← c+1 end if
        end if
        if A[c] > A[p] then
            A[p] ↔ A[c]
            p ← c
            c ← 2*p
        else
            exit while loop
        end if
    end while
end proc
```