Heapsort

Computational Effort

Best Case	Average Case	Worst Case
$O(n\,log(n))$	$O(n\,log(n))$	$o(n\,log(n))$

Pseudocode

```
procedure heapify(a, i, m)
```

```
(meaning: heapify a[i] until no further than a[m] in heap a)
```

```
Sorting of a heap a from position l to r
```

```
begin
  for i := r downto 2 do
    begin (swap a[l] with a[i], heapify a[l])
      t:= a[i];
      a[i] := a[l];
      a[l] := t;
      heapify(a, l, i - l)
    end
end
```

```
Create a heap with length n
```

```
begin
  for i := [n/2] downto 1 do
    heapify(a, i, n)
end
```