Heapsort (A as array) **O(n*logn)**

```
    BuildMaxHeap(A)
    for i = n to 1
        swap (A[1], A[i])
        n = n - 1
        Heapify (A, 1)
```

BuildMaxHeap (A as array) **O(n)**

```
    n = elements_in(A)
    for i = floor (n/2) to 1
        Heapify (A,i)
```

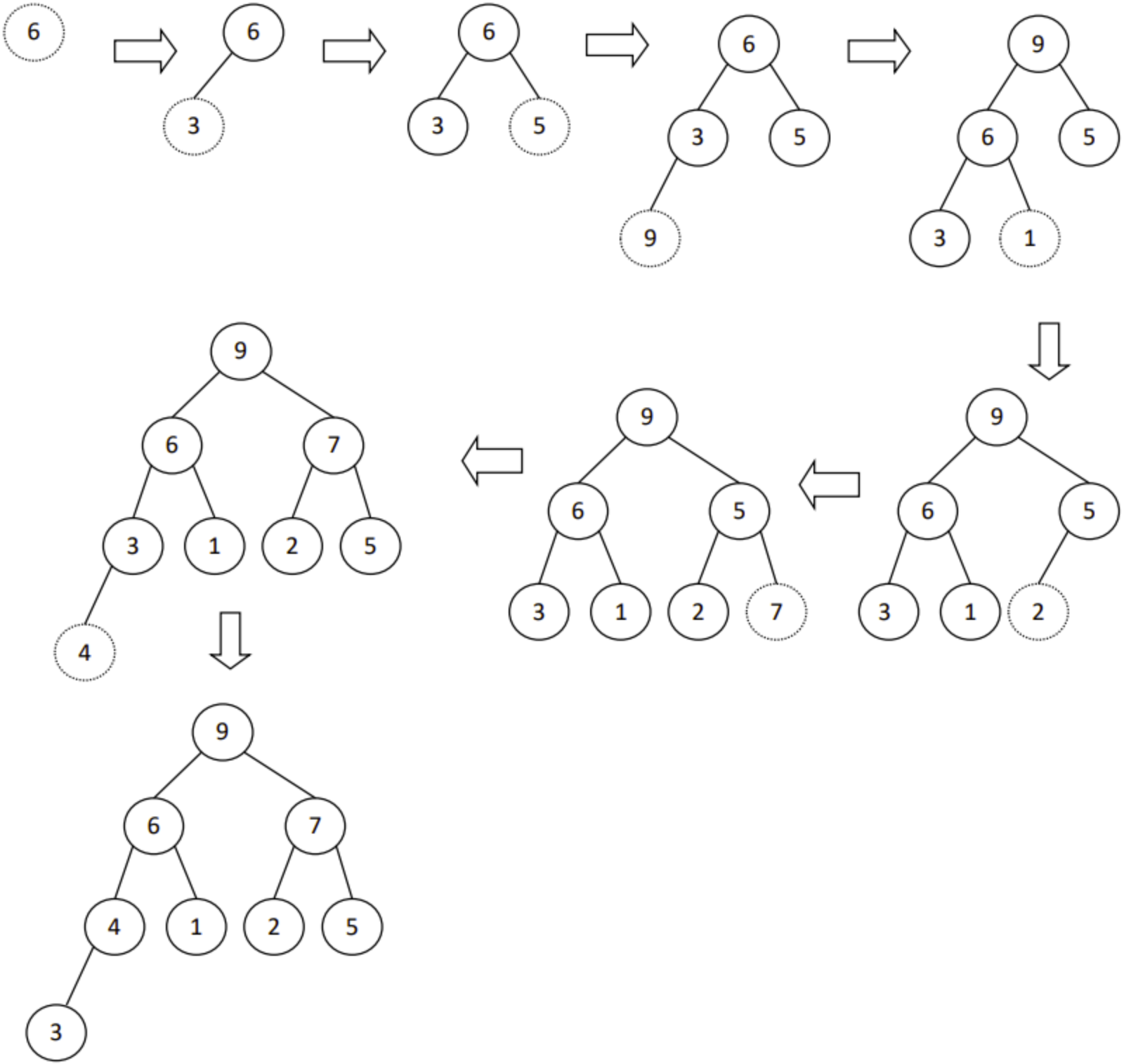
Heapify (A as array, i as int) **O(logn)**

```
    left = 2i
    right = 2i+1

    if (left <= n) and (A[left] > A[i])
        max = left
    else
        max = i

    if (right<=n) and (A[right] > A[max])
        max = right

    if (max != i)
        swap (A[i], A[max])
        Heapify (A, max)
```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