

## Heap Quiz

Given the following numbers in an array in this order:

36, 16, 21, 24, 25, 9, 41, 46, 39, 43, 48, 3

(The number 36 is at array[0] and 3 at array[11].)

Please complete the following exercises by hand.

1. Apply the heapify algorithm to create a **max-heap**. (It should work in linear time in the size of the array.)
2. Show what your max-heap will look like as an array and as a tree.