1. Write a method that receives an array in heap order and, for every element \( x \) in the heap, prints all the keys in the path from \( x \) to the root. Formally analyze the running time of your method.

2. Write a method that receives an array in heap order and, for every element \( x \) in the heap, prints all the keys in the path from \( x \) to the left-most descendent of \( x \) that is a leaf. Formally analyze the running time of your method.