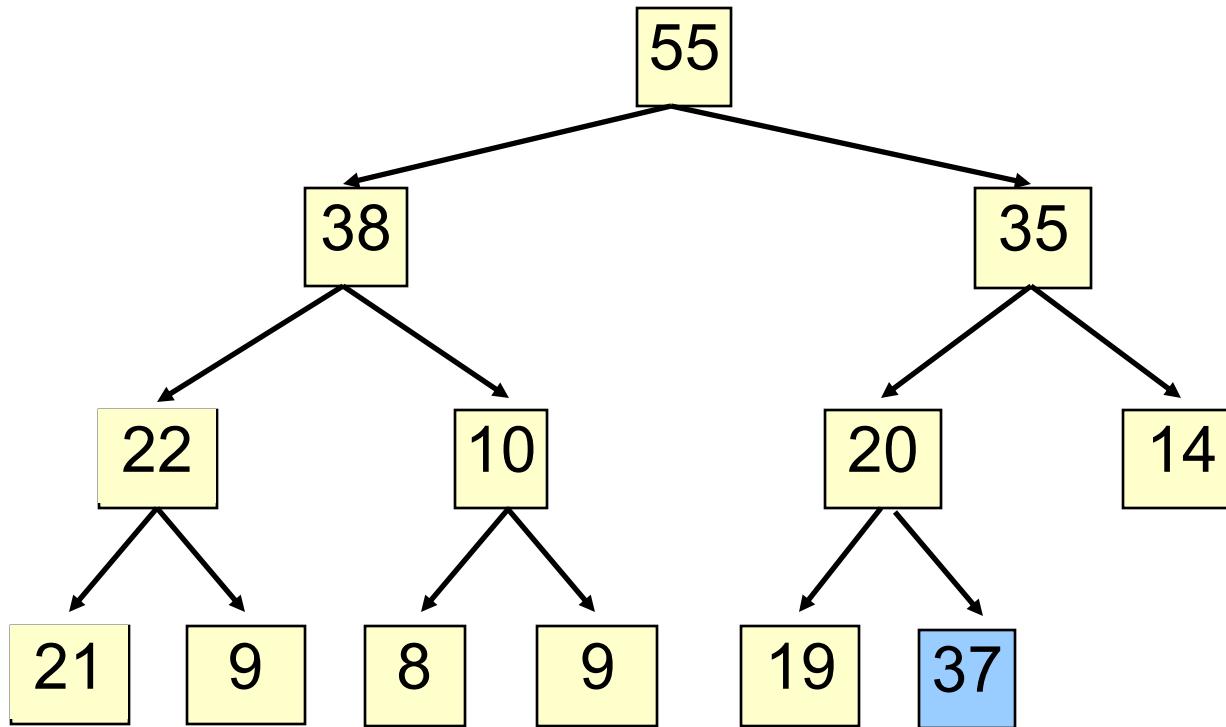
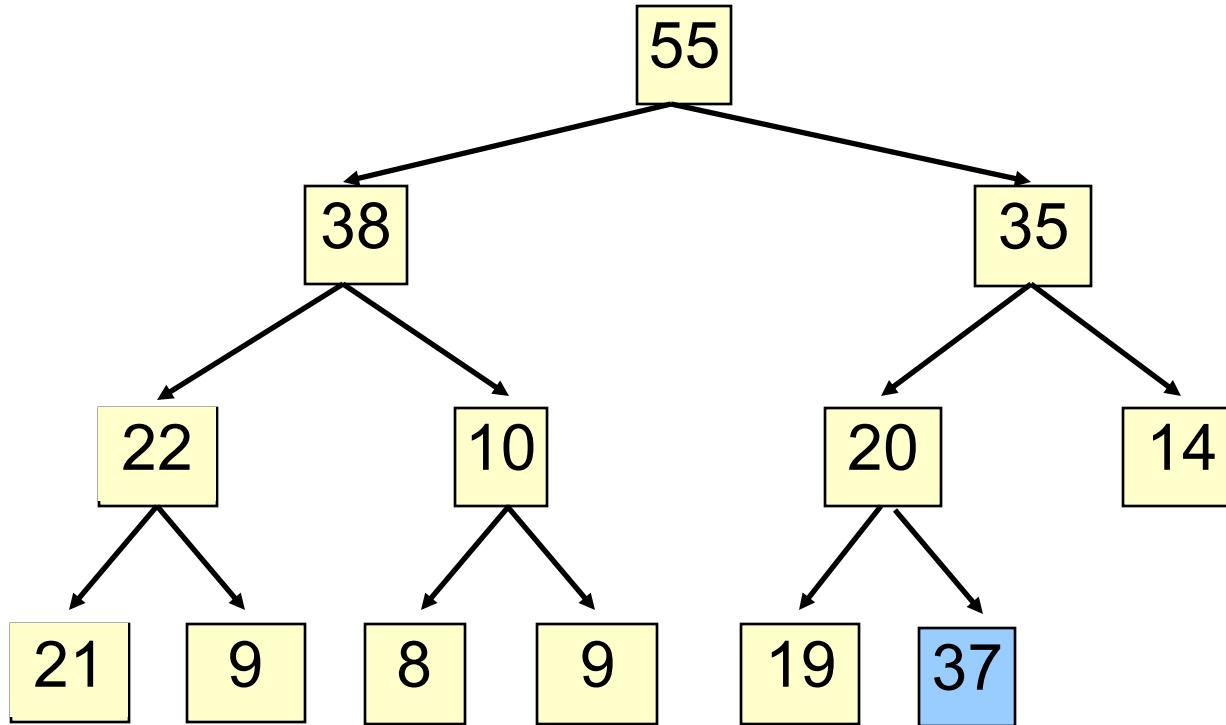


Heap: Insert 37

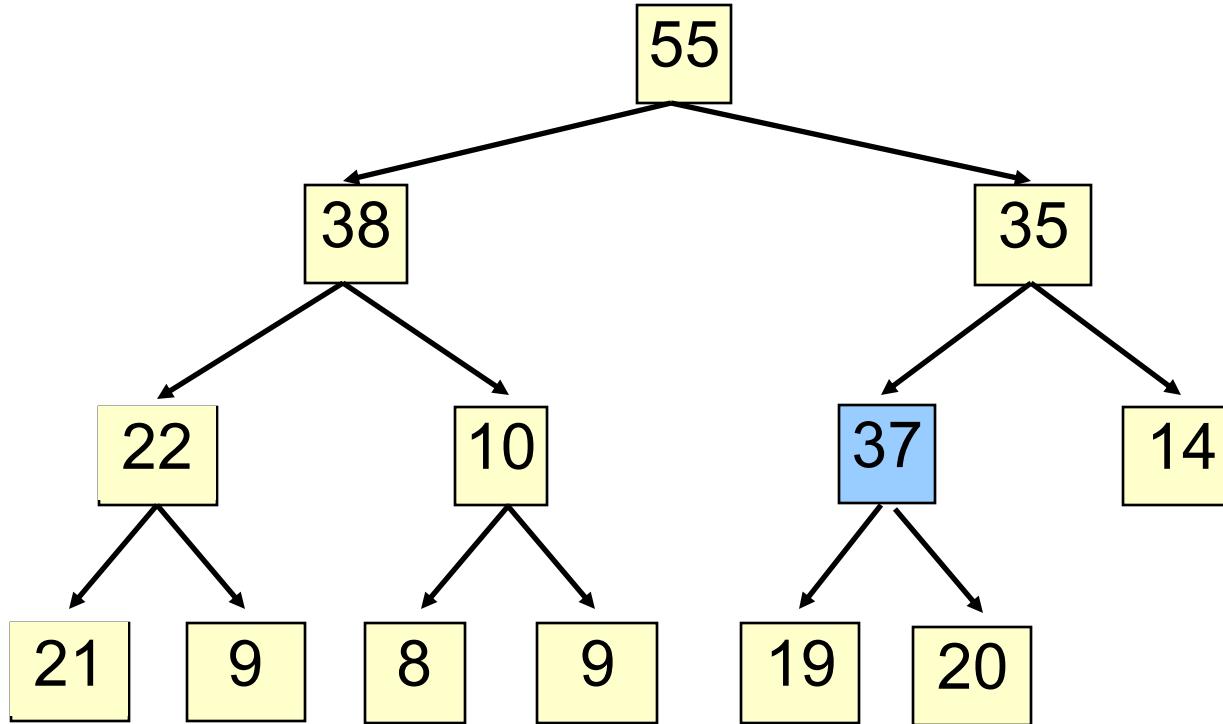


Heap: Insert 37



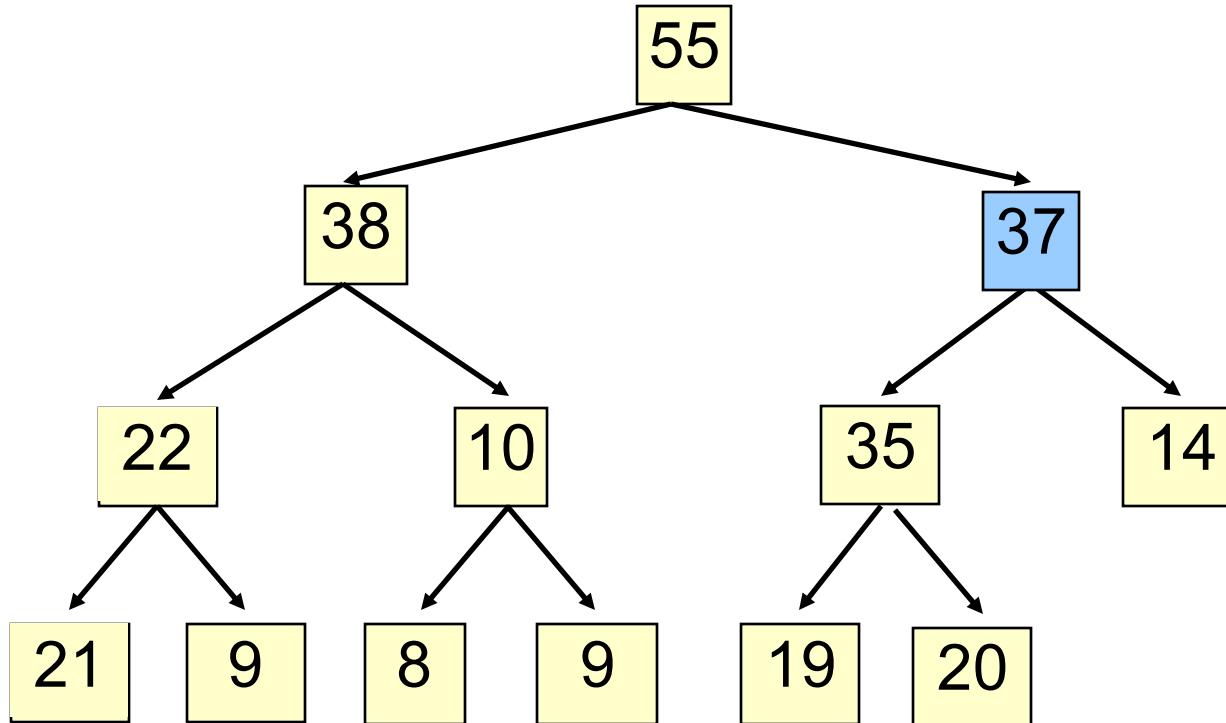
1. Insert 37: place it at the end of the array and increase heap size by 1. Why?

Heap: Insert 37



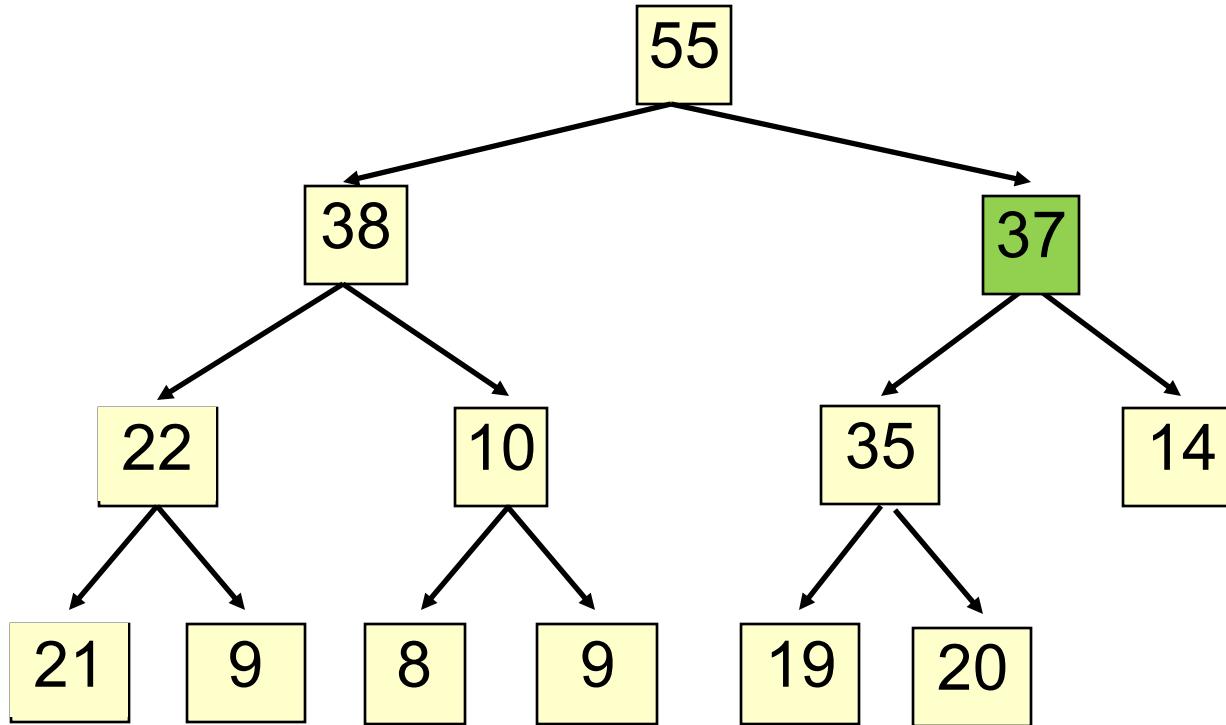
2. Percolate up because $37 > 20$, heap-order property

Heap: Insert 37



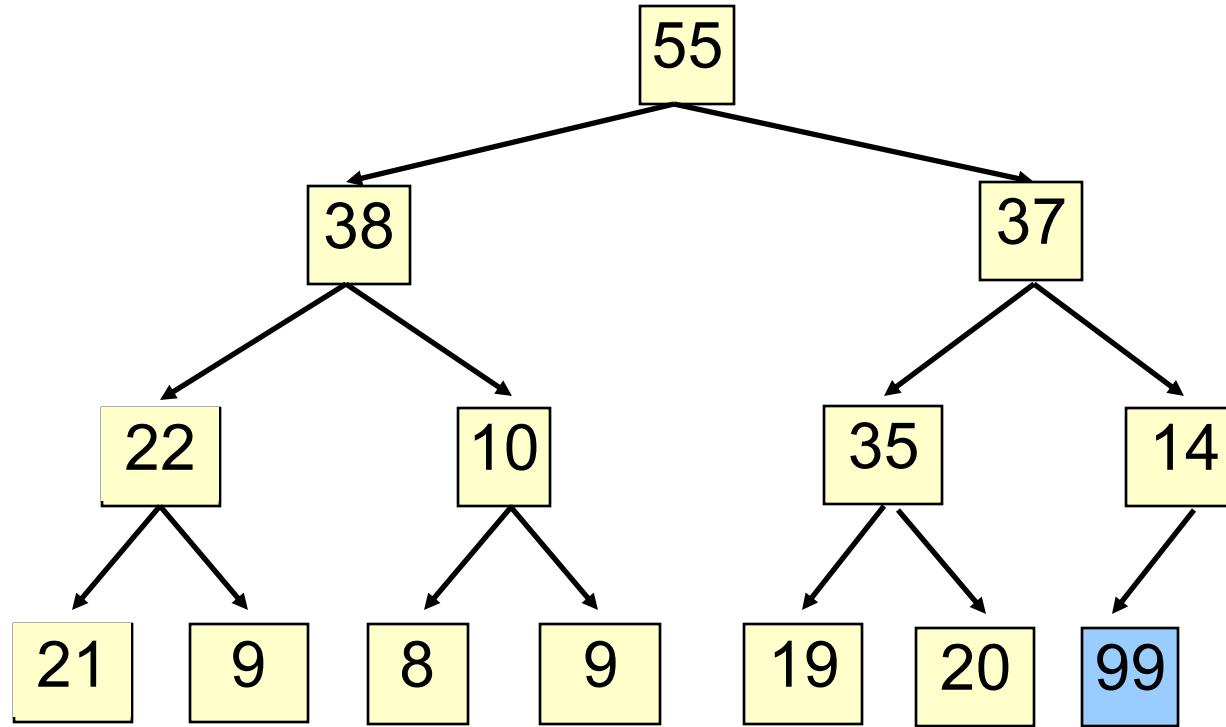
3. Percolate up because $37 > 35$, heap-order property

Heap: Insert 37



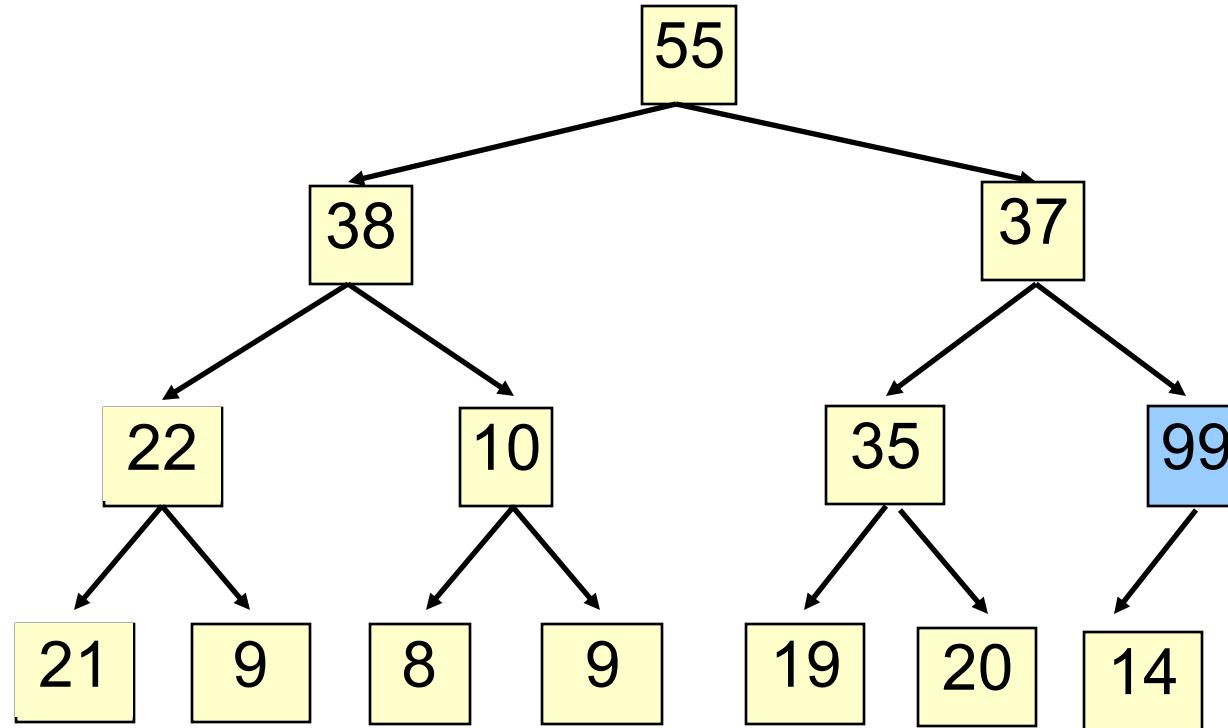
4. Stop percolation-up because $37 < 55$

Heap: Insert 99



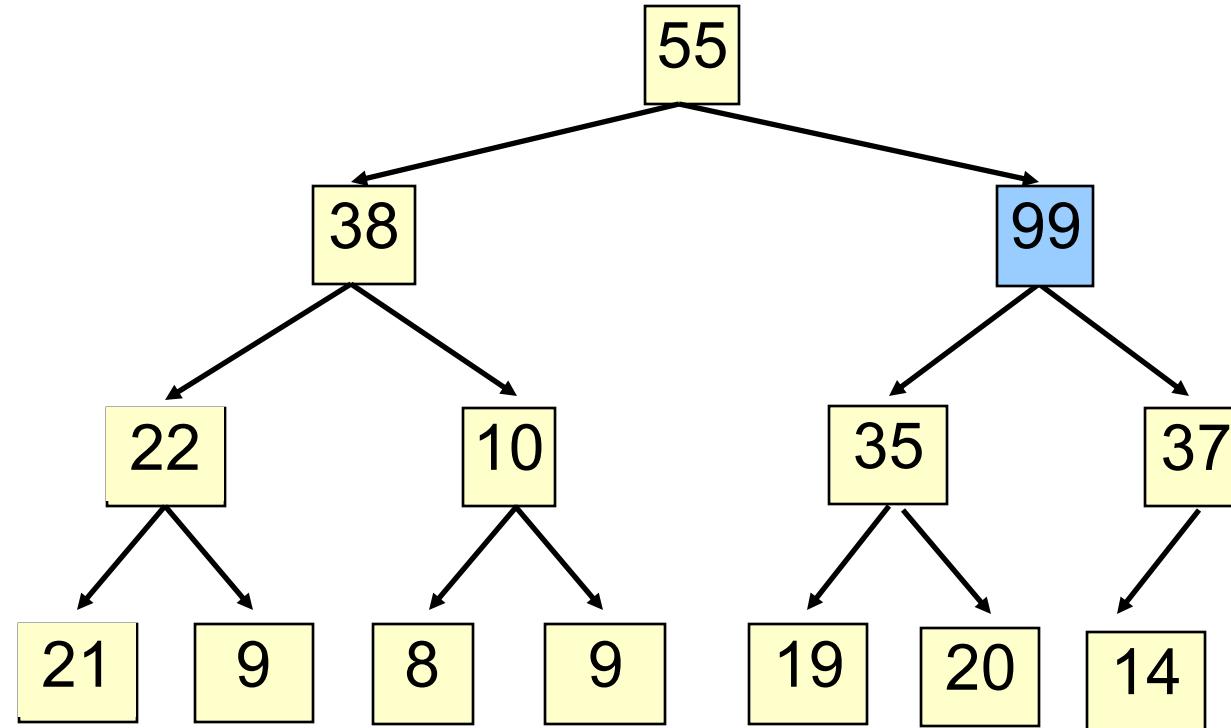
1. Place 99 at the end of the array, increase heap size by 1

Heap: Insert 99



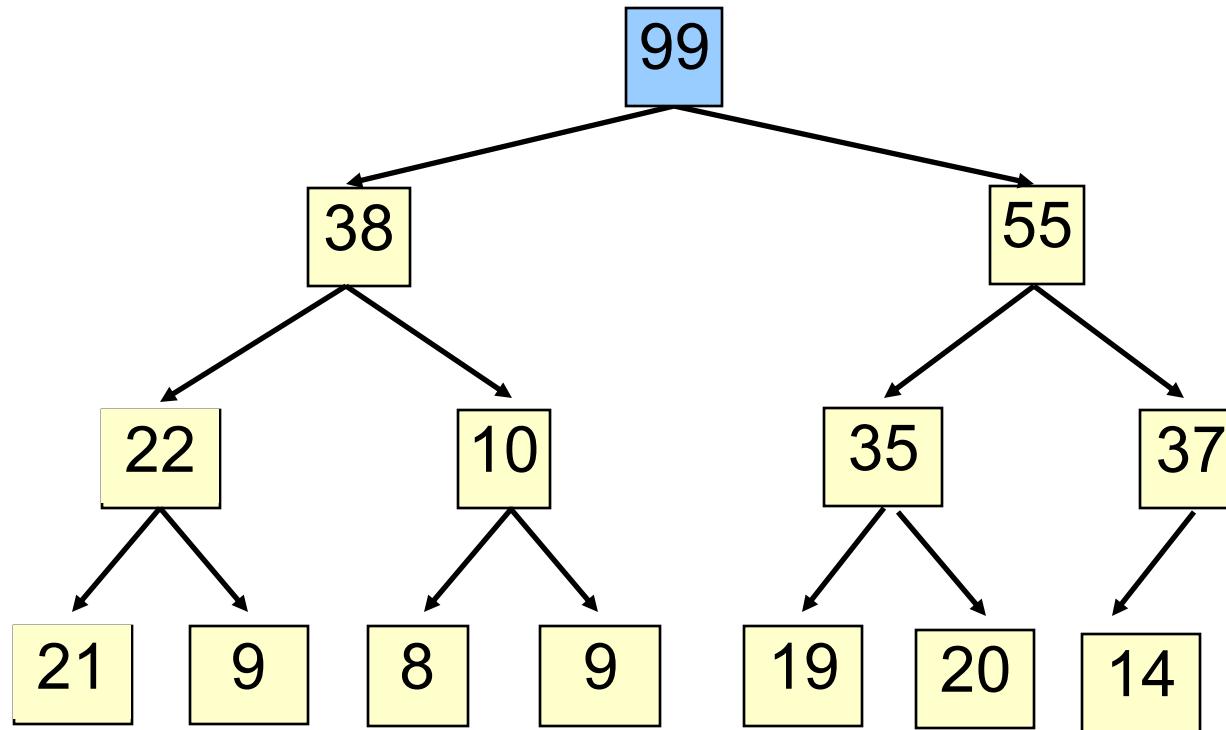
2. Percolate up because $99 > 14$

Heap: Insert 99



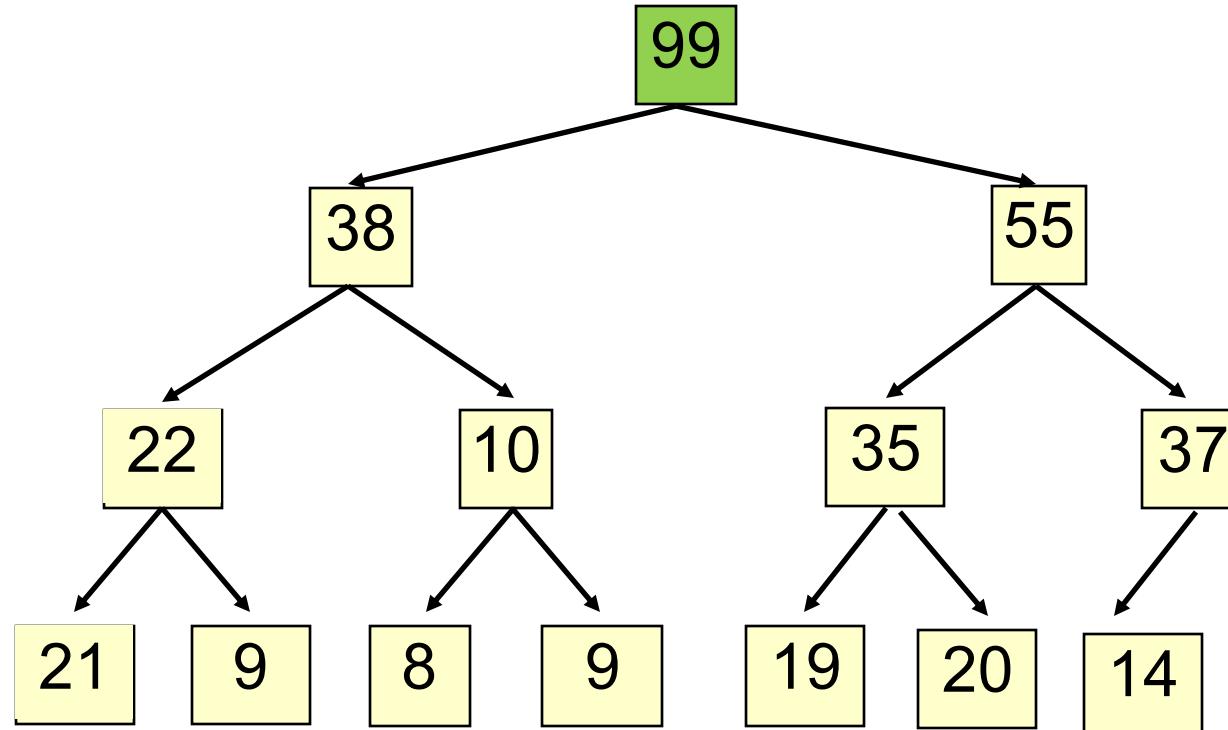
3. Percolate up because $99 > 37$

Heap: Insert 99



4. Percolate up because $99 > 55$

Heap: Insert 99



5. Stop as 99 becomes the new root