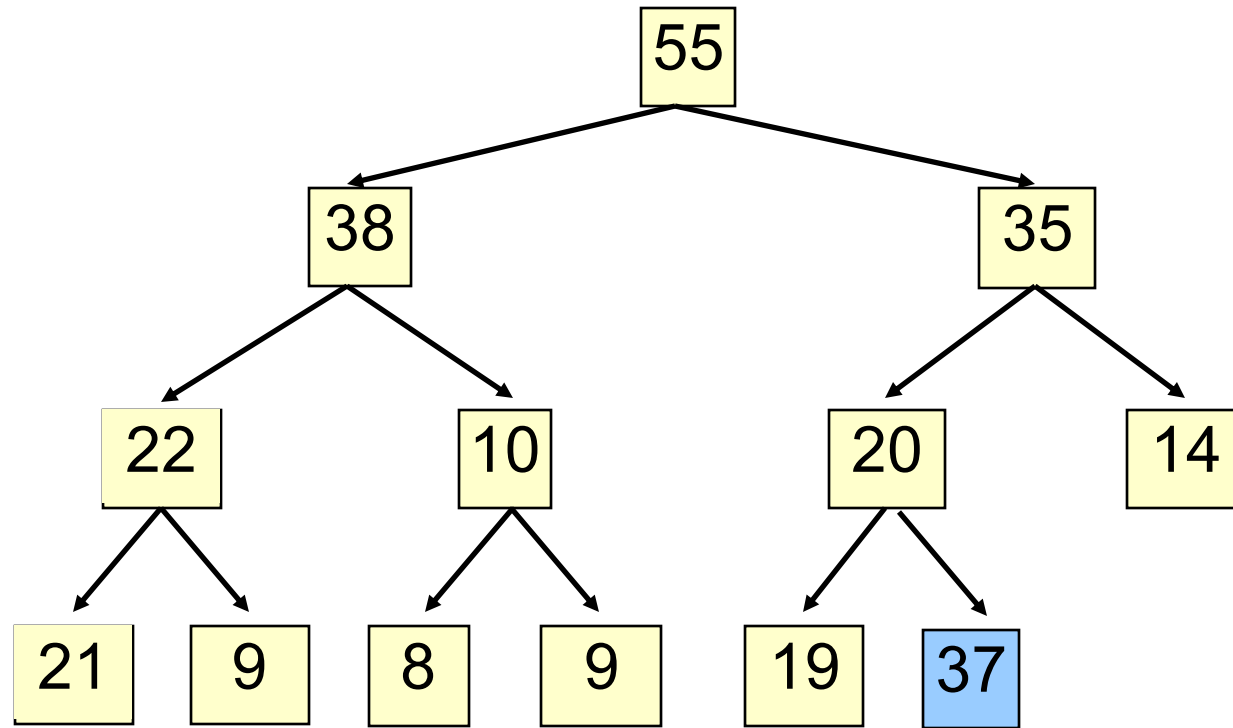
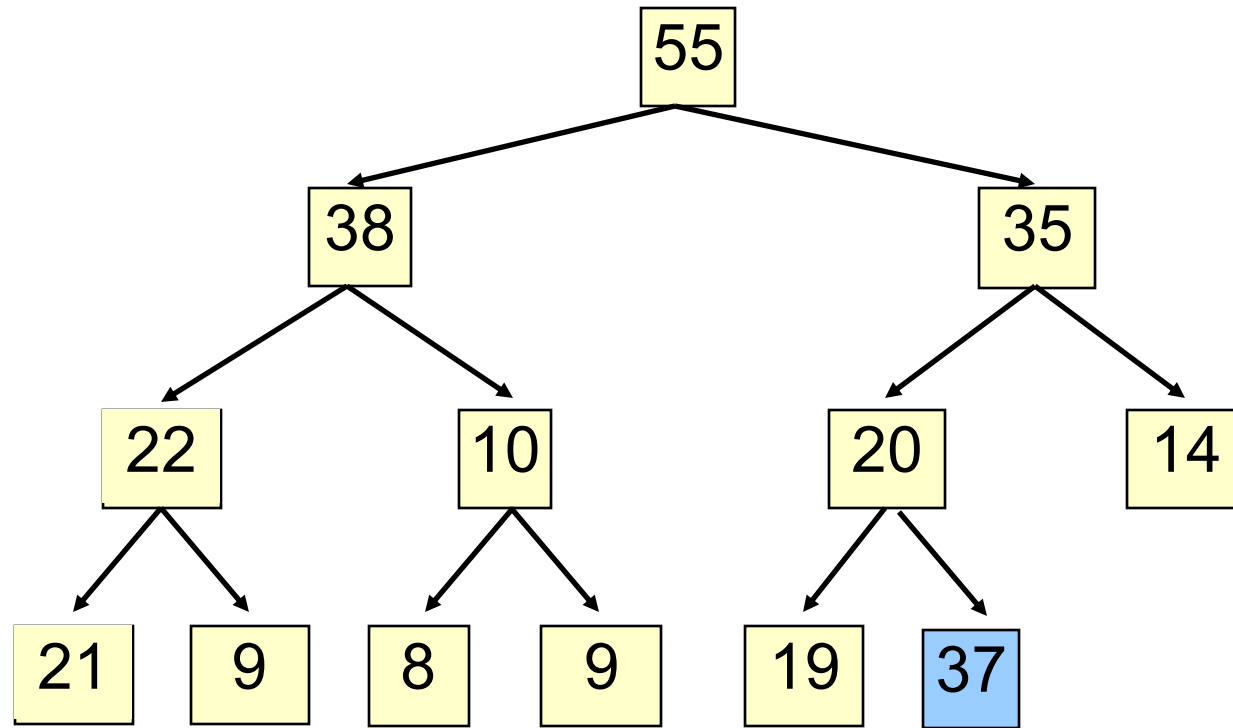


# Heap: Insert 37

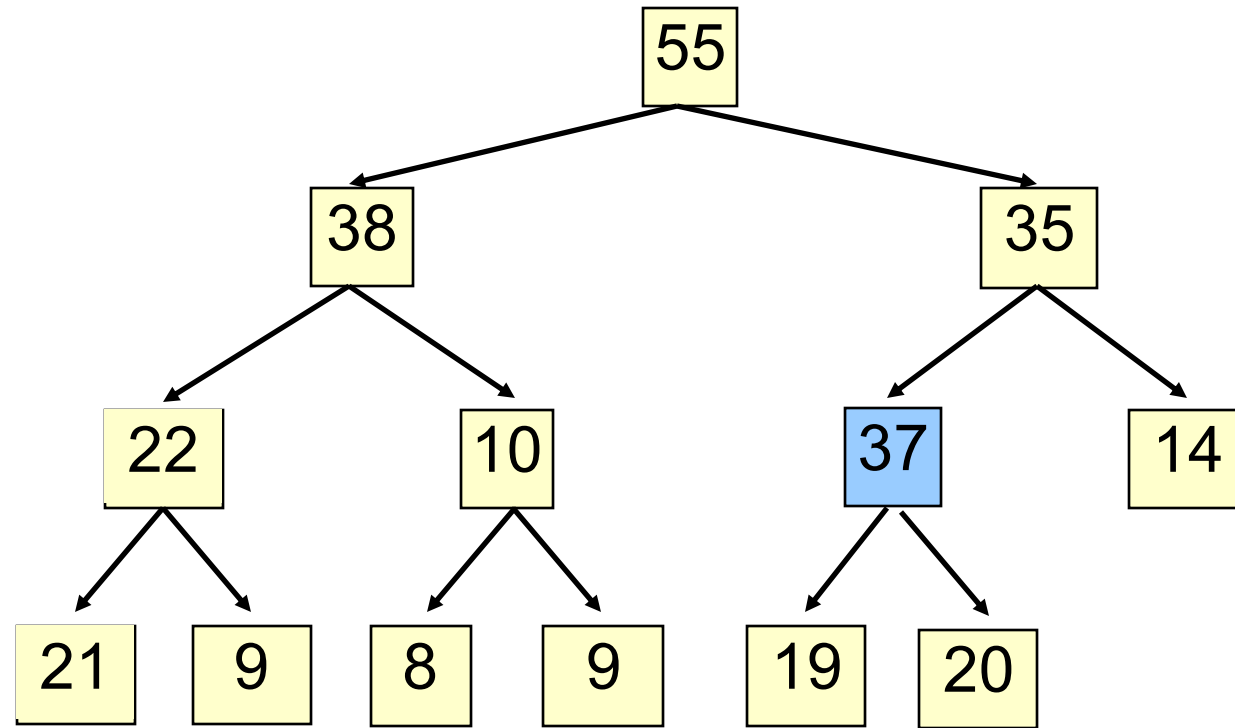


# Heap: Insert 37



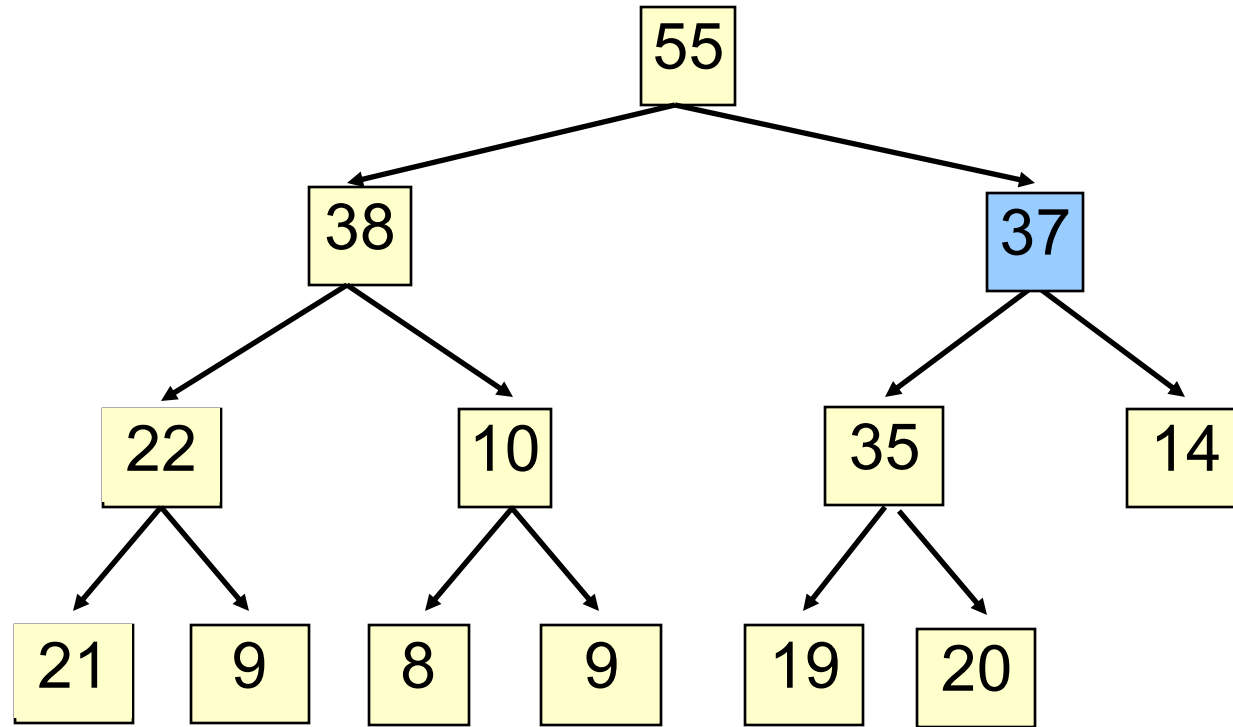
1. Insert 37: place it at the end of the array and increase heap size by 1. Why?

# Heap: Insert 37



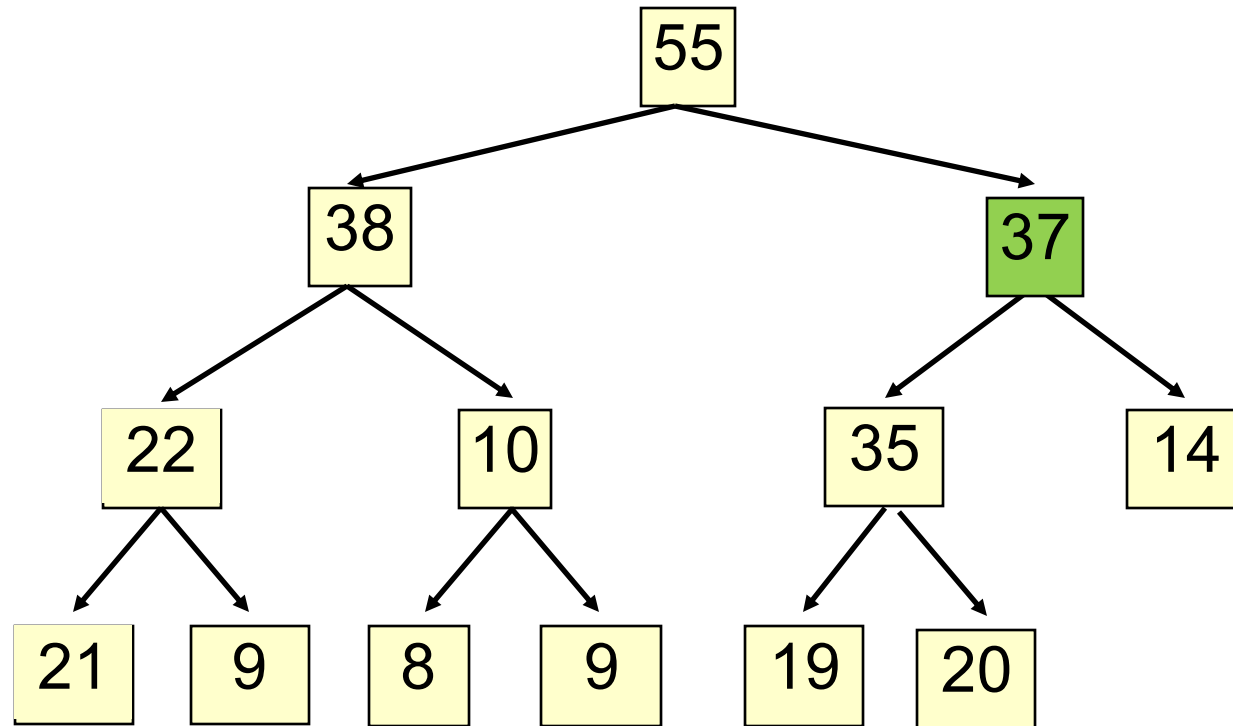
2. Percolate up because  $37 > 20$ , heap-order property

# Heap: Insert 37



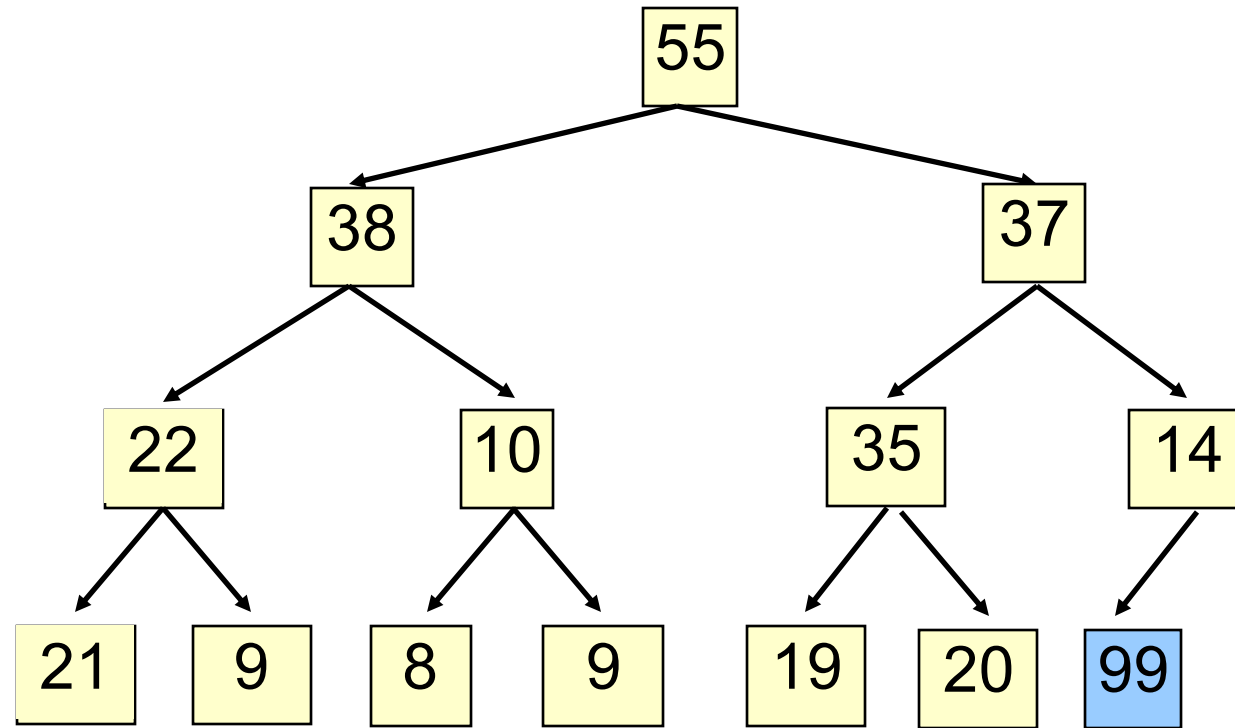
3. Percolate up because  $37 > 35$ , heap-order property

# Heap: Insert 37



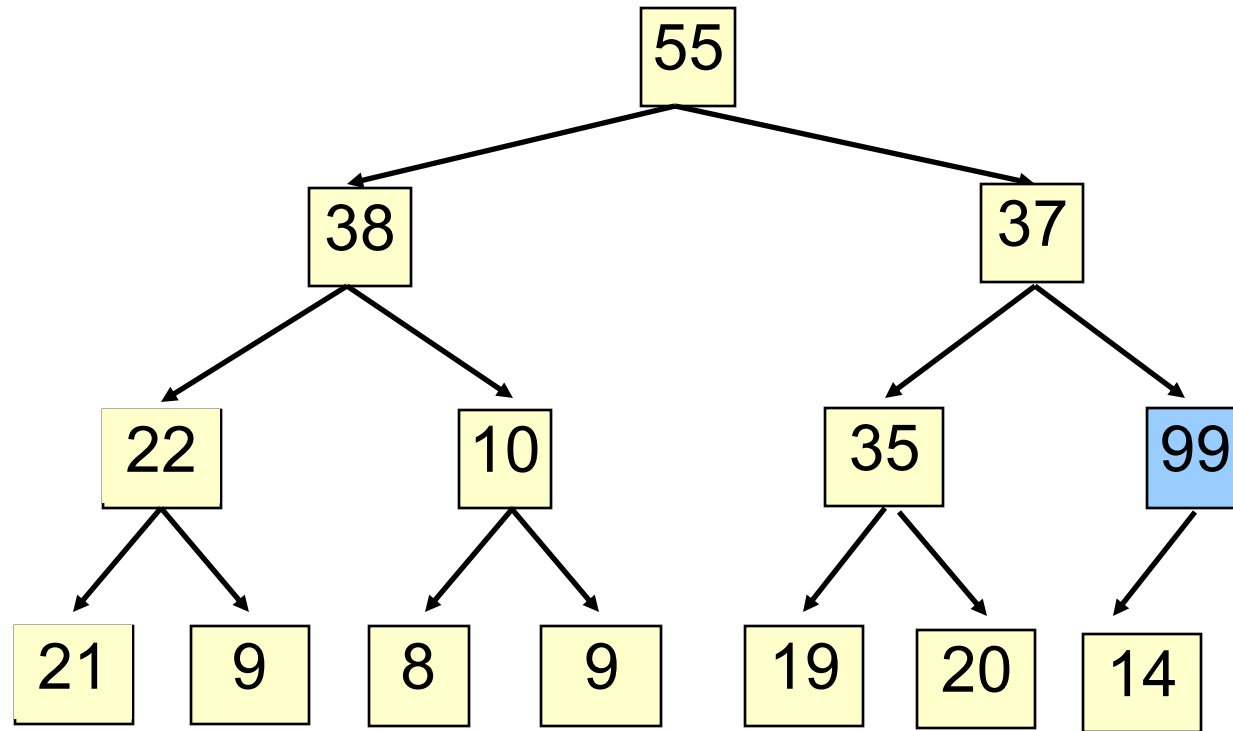
4. Stop percolation-up because  $37 < 55$

# Heap: Insert 99



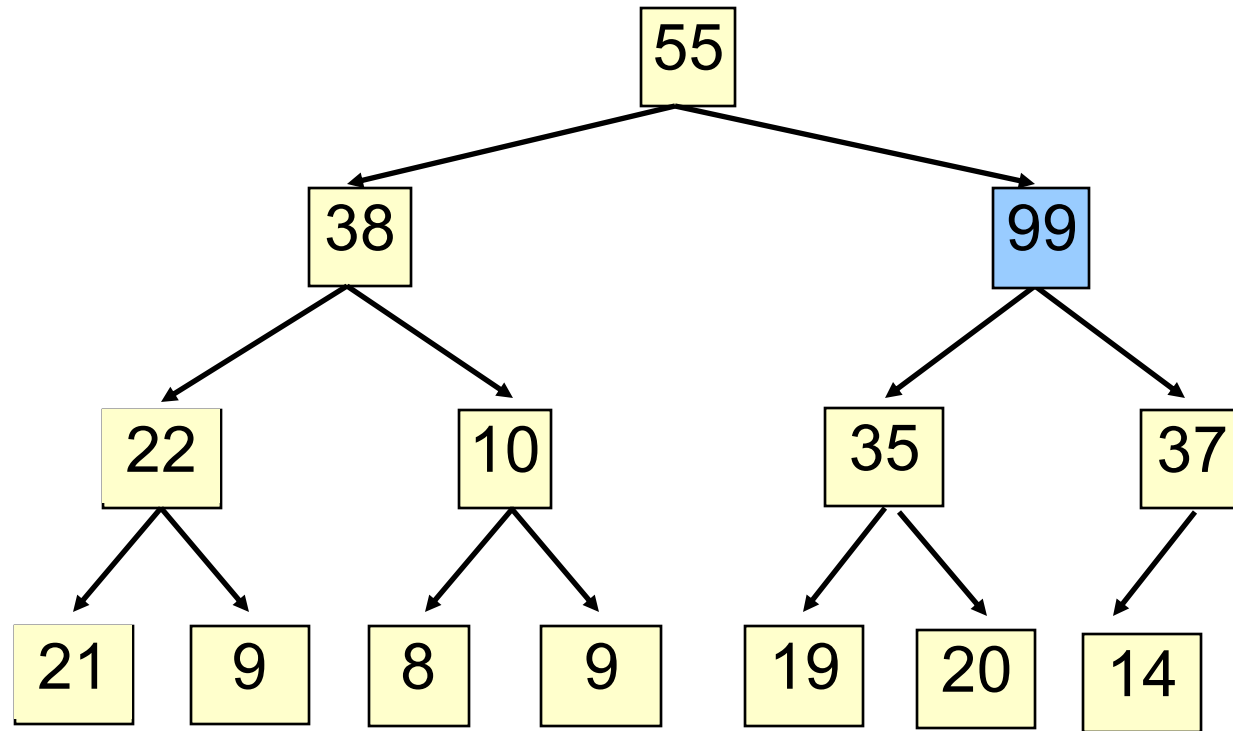
1. Place 99 at the end of the array, increase heap size by 1

# Heap: Insert 99



2. Percolate up because  $99 > 14$

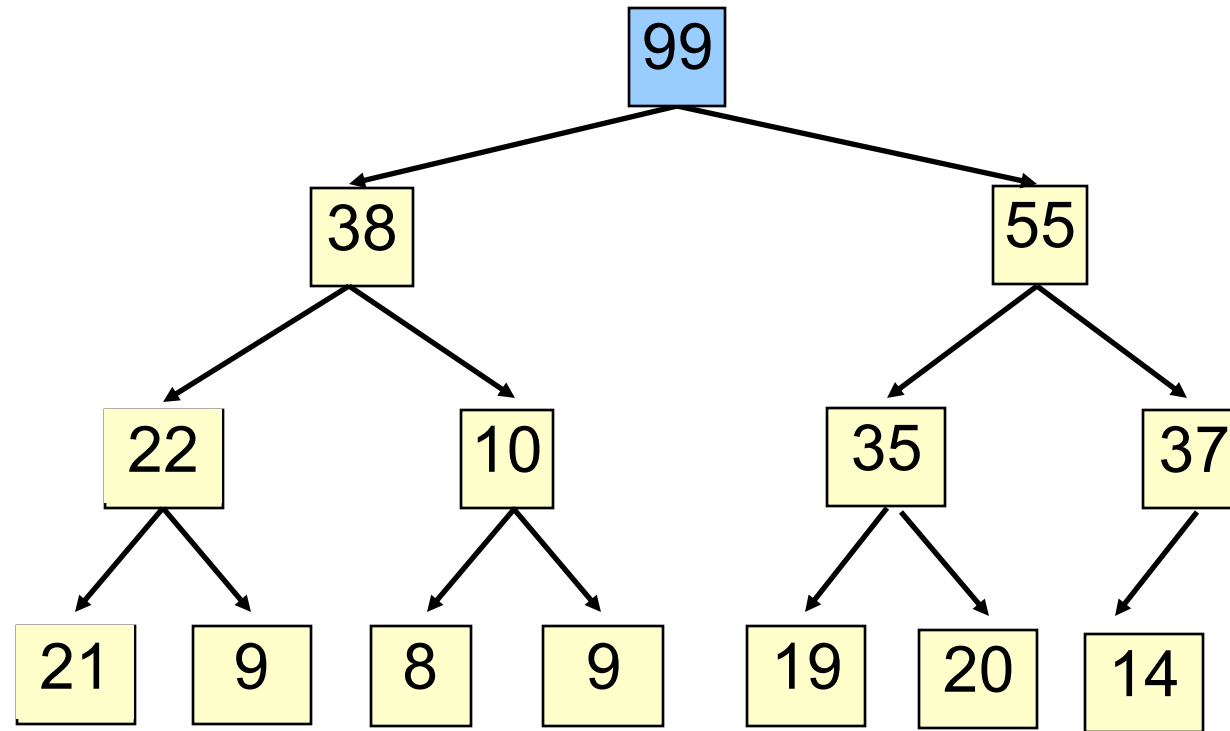
## Heap: Insert 99



3. Percolate up because  $99 > 37$

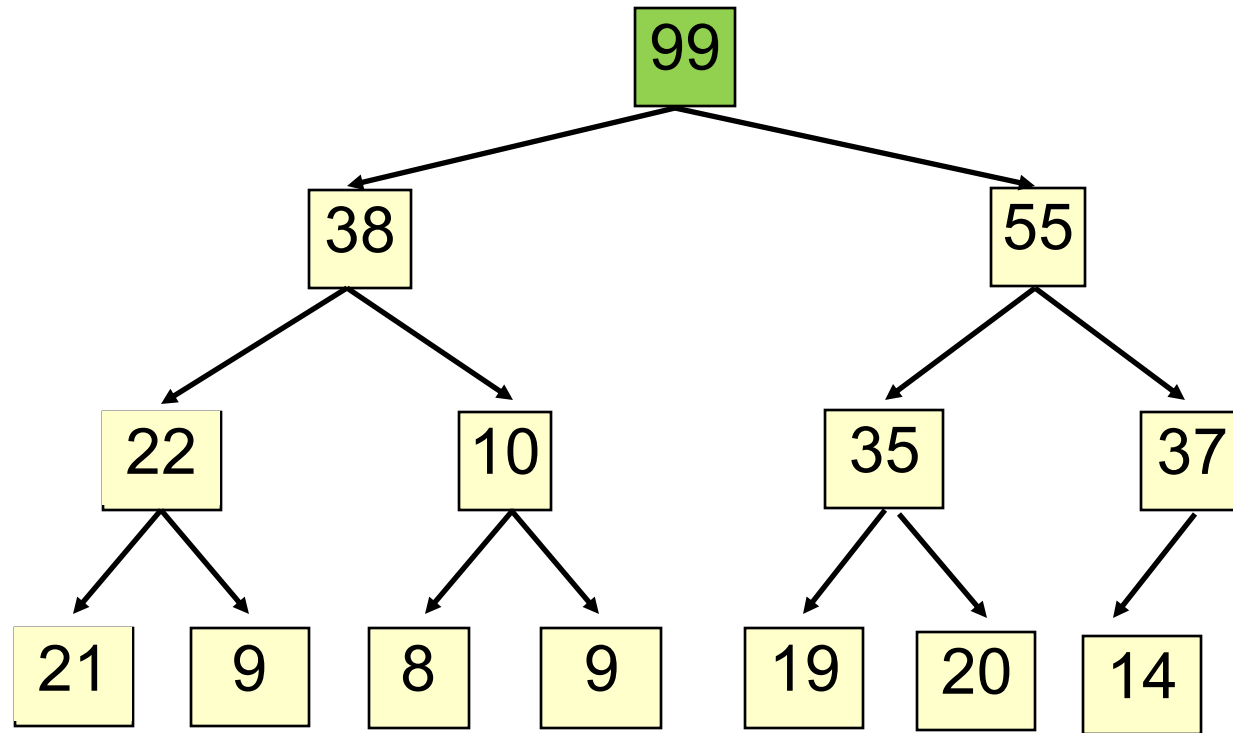


# Heap: Insert 99



4. Percolate up because  $99 > 55$

# Heap: Insert 99



5. Stop as 99 becomes the new root