/\*  
Реализовать алгоритм пирамидальной сортировки (сортировка кучей)  
 \*/  
class HeapSort {  
 public void sort(int[] Array) {  
 for (int i = Array.length / 2 - 1; i >= 0; i--)  
 heapify(Array, Array.length, i);  
  
 for (int i = Array.length - 1; i >= 0; i--) {  
 int temp = Array[0];  
 Array[0] = Array[i];  
 Array[i] = temp;  
  
 heapify(Array, i, 0);  
 }  
 }  
 private void heapify(int[] Array, int n, int i){  
 int largest = i;  
 int left = 2 \* i + 1;  
 int right = 2 \* i + 2;

if(left < n && Array[left] > Array[largest])  
 largest = left;  
  
 if (right < n && Array[right] > Array[largest])  
 largest = right;  
 if (largest != i){  
 int temp = Array[i];  
 Array[i] = Array[largest];  
 Array[largest] = temp;  
  
 heapify(Array, n, largest);  
 }  
 }  
}  
public class Main {  
 public static void main(String[] args) {  
 int n = 50;  
 int[] Array = new int[n];  
  
 for (int i = 0; i < n; i++)  
 Array[i] = (int) (Math.*random*() \* 1000);  
  
 for (int i = 0; i < Array.length; i++)  
 System.*out*.print(Array[i] + " ");  
 System.*out*.println();  
 HeapSort hs = new HeapSort();  
 hs.sort(Array);  
  
 for (int i = 0; i < Array.length; i++)  
 System.*out*.print(Array[i] + " ");  
 }  
}