Simulate the heapsort algorithm manually to sort the array:  SOSNA TARFKU

Show all steps
1. Make into a heap
2. Sort

**Max-Heap**

| idx | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [0] | 5 | 92 | 22 | 81 | 5 | 76 | 22 | 63 | 28 | 54 | 9 |
| [1] | 22 | 76 | 76 | 76 | 76 | 63 | 54 | 54 | 28 | 28 | |
| [2] | 9 | 31 | 81 | 48 | 48 | 48 | 48 | 43 | 43 | 43 | |
| [3] | 76 | 54 | 54 | 54 | 59 | 59 | 22 | 22 | 22 | | |
| [4] | 63 | 63 | 63 | 63 | 5 | 5 | 5 | 5 | 5 | | |
| [5] | 81 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 54 | | |
| [6] | 48 | 43 | 43 | 28 | 28 | 28 | 63 | 63 | | | |
| [7] | 92 | 22 | 22 | 22 | 76 | 76 | 63 | 63 | | | |
| [8] | 54 | 5 | 5 | 81 | 81 | 81 | 81 | 81 | | | |
| [9] | 28 | 28 | 92 | 92 | 92 | 92 | 92 | 92 | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **[0]** | 43 | 5 | 23 | 22 | 9 | 9 | 5 | 5 | | | |
| **[1]** | 23 | 23 | 5 | 5 | 5 | 5 | 9 | 9 | | | |
| **[2]** | 9 | 9 | 9 | 9 | 9 | 22 | 22 | 22 | | | |
| **[3]** | 22 | 22 | 22 | 28 | 28 | 28 | 23 | 28 | | | |
| **[4]** | 5 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | | | |
| **[5]** | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | | | |
| **[6]** | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | | | |
| **[7]** | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | | | |
| **[8]** | 81 | 81 | 81 | 81 | 81 | 81 | 81 | 81 | | | |
| **[9]** | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | | | |

SOSNA TARELU