| COS 226 Fall 2018 Class Exercise 17 | 3 questions; 2 pgs. |
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Today: Synthesis; review. §§ 18.*; 21.*.
Next class Portfolio and poster presentations.
Reminders: newsgroup; homework (resubmission); final exam.

1. Write your group members' names below. Underline your name.
2. Depict all binary search trees that contain the four keys $1,2,3$, and 4 (only). For each tree, depict all sequences of insertions of keys that result in that tree.
3. Trace the action of heapsort on the array: $\begin{array}{llllllllllllllllllllll}54 & 19 & 61 & 91 & 53 & 15 & 47 & 29 & 60\end{array}$

Depict the states of both the array and the implicit binary heap (in tree form) for each of the first three iterations. For the remainder, depict only the state of the array.

