Figure 20.0 Sorting—by hand vs. computer.

Sorting is a major consumer of computer power.

We know how to do it by hand:

- one approach

  Pancer
Clarke
Newton
Einstein
Arnow
Weiss

- another approach

  Pancer
Clarke
Newton
Einstein
Arnow
Weiss

We could convert either of these approaches into an algorithm, but instead we'll develop a technique that allows us to $\boxed{\text{reuse existing software}}$.

Consider the **countSmaller** method taken from the "find-the-median" problem:

private static int countSmaller (int refVal, int[] list)

Recall this returns the number of items in **list** that are less than **refVal**.

For example, if **list** is

7
5
6
9
8

then **countSmaller(6, list)** returns $\boxed{1}$.