Figure 22.0 Choosing an algorithm.

We now have two methods, based on different algorithms,
for the same purpose:

1. a “counting sort”
2. bubble sort, a kind of “exchange sort”

And we could add a couple more:

3. “insertion sort”—like putting books on a shelf
4. “merge sort”—combining two sorted lists into one

Which sorting algorithm is best?

Or, given just the two we know about, which of the two is better?

What does “better” mean?

better = faster

—at least for large problems, such as sorting,
where even a computer sometimes can’t keep up

Now what does “faster” mean?

—we need a way to quantify the speed of an algorithm