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Homework 13

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The new one will not be better than the naive one because there is so much overhead with the new one. The pack method mixed with the prefix sum method adds a lot of overhead making the constants high even though it is $\log n$ span. As such, the naive one is faster for shorter arrays. We would have to make the array size huge or increase the processors greatly before seeing any speedup from parallelizing partition.

We deserve a 12/20 because we started working with the partition and got it close to working, however, it kept giving a segmentation fault. Then we started working on getting pack to work and it is also close. PackUp and PackDown both work and the array returned in the parallel section is correct. However, after leaving this section, the array is different so we're not really sure where that comes from, and this array is being returned.