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Homework 4 Reflection

Outputs:

Appends (N)	Replications (N)	Approach A (s)	Approach B (s)	Approach C (s)
1000	3	0.0003	0.0004	0.001
10000	3	0.0032	0.0036	0.1132
100000	3	0.0325	0.0373	13.3706
1000000	3	0.3234	0.3672	1337.06

Reflection

      The input size affected the results by making the code take longer to run for each. For the smaller inputs, there wasn't much of a difference between the three approaches. However, once we got more data, it was clear that Approaches A and b were significantly more efficient than Approach C. Approach A was the most efficient on my machine and was running slightly faster than Approach B. Still, it seems like the difference is negligible; even for the larger data, it was only a few hundredths of a second faster. However, as we got to the larger inputs, approach c began to take a long time to run, with the last calculation taking almost 25 minutes. Thus, approach C is inefficient, and I would not want to use it in my code; in the case I were running a larger dataset than this.