**Week 2 Discussion**

What do we mean when we ‘vectorize’ an operation in R? How can you apply vectorized operations in your R code? Your response should be one paragraph, and you must respond to three other students’ posts.

A vectorized operation in R refers to an operation that applies to an entire vector as a single entity instead of having to act on each element individually. Most functions in R are vectorized, including arithmetic, comparison, and logical operators. One example of a vectorized function in use is the multiplication of a vector. For example, if you wanted to know what 1 through 10 times 2 was, you could create a vector containing 1 through 10. You could then multiply that vector by 2, which would output 2, 4, 6, 8, etc. This would be much more efficient than computing each element separately as 1 \* 2, 2 \* 2, etc. Overall, vectorization is an excellent time-saving skill in R and helps increase code efficiency and conciseness.

Sources:

Yale University. (n.d.). R for Novices: Vectorization. https://docs.ycrc.yale.edu/r-novice-gapminder/09-vectorization/#:~:text=Most%20of%20R’s%20functions%20are,read%2C%20and%20less%20error%20prone.