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Programming Challenges

Assignment 4

<https://forms.office.com/r/dbbt12Z00W>

Greatest Common Divisor of Three Integers – GDCOFTI:

For this program, I decided to use two functions. The main function just gets the three numbers needed and then prints out the greatest common divisor. The second function just returns recursively calls itself until it is 0. The time complexity of this program is O(log(min(num1, num2, num3)).

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Arithmetic Evaluation – ARTHEVAL:

This program was more difficult than the other two. There were three functions total. The evaluate function is what did the math. All the function really does is search through the expression passed to it while popping off each element at a time. The time complexity of this program is O(n).

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Aggressive Cows – AGGRCOW:

For this program, I used three functions. The main function takes in the input and then calls the binary search. The binary search function then recursively calls isValid until a solution is found. The time complexity of this program is O(N log M)



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